FireMastic-300™

Flexible fire and acoustic rated acrylic sealant. Suitable for sealing joints, linear gaps and service penetrations.

Approved to AS1530.4: 2014 & AS4072.1-2005

Technical Data Sheet

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Industry leading fire protection….

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KEY BENEFITS

- Provides up to an industry leading 5 hour fire rating
- Highly flexible offering up to 40% movement
- Highly cost effective solution
- High Intumescent Content
- Up to 67dB sound reduction
- Suitable for Linear Gaps, Penetration Seals & Dampers
- Approved in a large variety of substrates; FR Plasterboard, Concrete, AAC, Hebel, Speedpanel, Korok, Timber, CLT, AFS, Dincel, solid and hollow masonry.

INTRODUCTION

BOSS FireMastic-300™ intumescent fire-rated & acoustic acrylic sealant is a one-part acrylic emulsion that is designed to resist the passage of fire, smoke and sound. FireMastic-300™ will intumesce and form a char when exposed to the heat of a fire, which will prevent the passage of fire and smoke for up to 5 hours in both integrity and insulation. In normal use it will also maintain the sound reduction index of a structure.
FireMastic-300's superior acoustic properties means it offers up to a 67dB sound reduction, making it ideal for high performance acoustic installation.

PRODUCT APPLICATIONS

- Linear gaps seals in plasterboard ceilings and dry wall linings
- Sealing and filling joints in fire rated plasterboard systems
- Sealing of low movement construction joints
- Sealing the perimeter of intumescent dampers
- Fire Stopping around various services:
  - Steel & Copper Pipes
  - Cables
  - Cable Bundles
  - Cable Trays
  - Secondary sealing in-conjunction with other BOSS Fire products
- Areas requiring acoustic barriers or sound reduction
- Internal use only, can be painted

PHYSICAL SPECIFICATION

FireMastic-300™ is water based, non-sag, fire rated acrylic sealant. It is specifically designed for interior joints with up to 40% movement (+/- 20% either direction) of the original joint width, and non-combustible service penetrations.

FireMastic-300™ does not emit halogenated by products under fire conditions and contains no raw materials known to have an estrogenic effect on the environment. It has good un-primed adhesion to a wide variety of common building substrates.

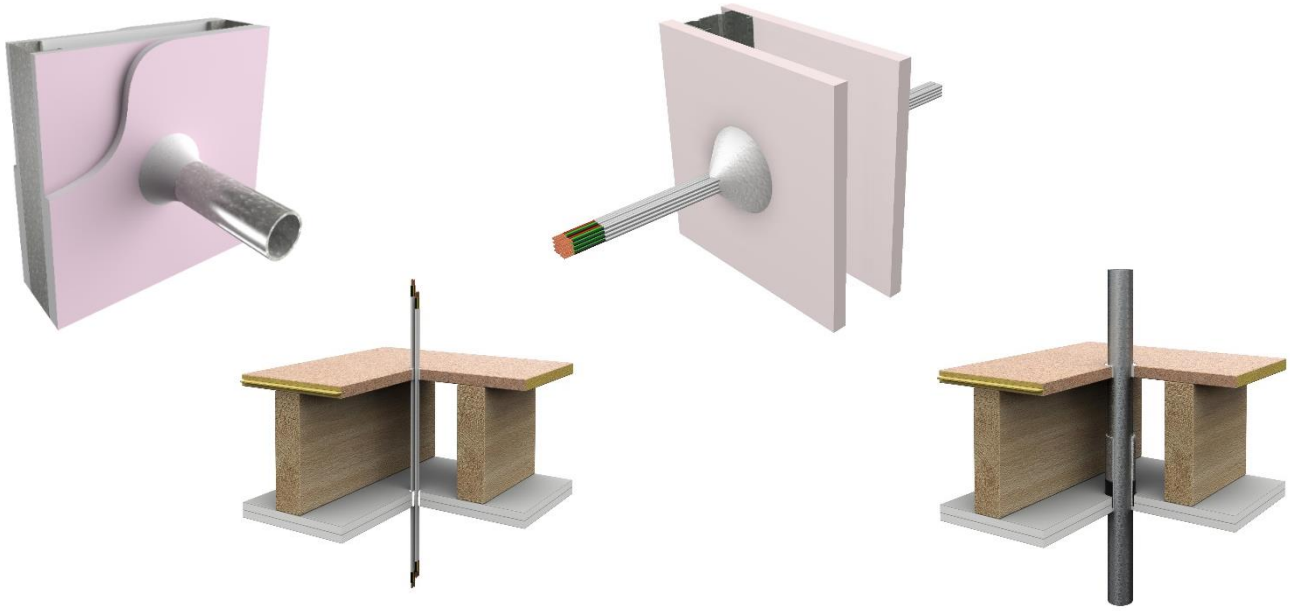
Sizes:	310ml / 600ml
Colours:	Light Grey / White
Product code:	FM300
Shrinkage:	Approximately 12%
Cure rate:	3mm/day @ 50% relative humidity 23°C Cure for min 28 days curing before fire exposure.
Slump:	5mm after 1hr in 30mm joints
Drying time:	Tack dry in 30 min (23deg)
Flexibility:	40% (+/- 20% of joint)
FRL:	Up to -/300/300
Acoustic Rating:	Up to Rw (C;Ctr): 63(-2;-7) in partition. Rw (C;Ctr): 51(-1;-6) sealant only.
Shelf life:	24 Months

PERFORMANCE SPECIFICATIONS

FireMastic-300™ has extensive fire test approvals including AS1530.4-2014 and AS4072.1-2005 offering up to FRL -/300/300. Please refer to the further tables contained in this document for specific performance information relevant to each various applications.

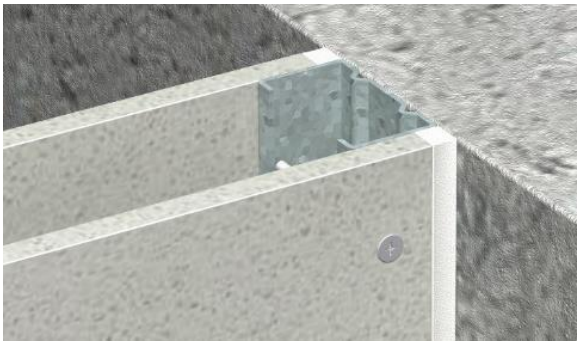
INSTALLATION

1. Ensure that the gap, aperture and/or services in question are tested with BOSS FireMastic-300™ and the site conditions are within the application specification.
2. Ensure all surfaces are clean, dry and free from grease.
3. Use masking tape to provide straight edges around surfaces, if required for aesthetics.
4. Please refer over page under backing rod to determine of a backing rod is required.
5. Cut nozzle to required bead size and apply to substrate via a caulking gun. Smooth out sealant with a wet spatula within 5 minutes for professional finish.
6. Clean tools immediately after use with water.
7. Tack dry within 30mins, cures 3mm per 24hrs.



WALL SYSTEM GAP SEALS
Linear Gap Seals, System Joints and Construction & Expansion Joints

FireMastic-300™ can be used to provide an FRL of up to -/300/300, subject to the maximum integrity and insulation of the wall. Generally as the fire resistance of plasterboard wall increases, the thickness of lining increases also and therefore the depth of the seal will increase. The gap of up to 20mm must be the full depth of the plasterboard and will offer the FRL of the wall system up to -/300/300. **– Ref Branz FAR 3821 – Issue 4.**



Examples of suitable plasterboard systems (timber framed or steel framed):

- ✓ T-junction between masonry wall and plasterboard wall
- ✓ T-junction between 2 plasterboard walls
- ✓ Control joint in plasterboard wall
- ✓ Pipe and service penetrations through plasterboard (such as electrical services, metal pipes or ductwork) where a fire seal is required.
- ✓ Plasterboard walls to ceilings
- ✓ Timber to timber and timber to plasterboard junctions
- ✓ Masonry to steel junctions
- ✓ Perimeter edge and deflection head seals in various fire rated wall systems. (See below table).

WALL SYSTEM GAP SEALS

Type	Element	System Description	Seal Size	FRL	Certification Reference
Fire Rated Plasterboard AAC / Hebel Speedpanel Dincel AFS Shaftliner Korok Concrete Metal Clad AAC	Perimeter Edge Seals	FireMastic-300™	10mm	-/300/300	Branz FAR 3821 Issue 4
	Deflection Head Seals	FireMastic-300™	20mm	-/300/300	Branz FAR 3821 Issue 4
Masonry (For more info please see page 5).	Linear Gap Seals	FireMastic-300™	25-50mm	-/300/180	Branz FAR 3821 Issue 4
Fire Rated Plasterboard	Linear Gap Seals	FireMastic-300™	50mm	-/60/60	PFITS FAR 190042 Issue 2
AAC (Minimum Density 670kg/m³	Linear Gap Seals	FireMastic-300™	50mm	-/60/60	PFITS FAR 190042 Issue 2

TIMBER INTERFACES

Please note that below references to Timber refer to Hardwood Timber with a density of 410kg/m³ or greater:

Interface Materials	Orientation	Element	System Description	Seal Size	FRL	Certification Reference
Timber to Timber	Walls / Floors	Linear Gap seals	FireMastic-300™	Gap Sizes No Greater than 50mm.	-/60/60	PFITS FAR 190042 Issue 2
Timber to Fire Rated Plasterboard	Walls / Floors / Ceilings	Linear Gap seals	FireMastic-300™	Gap Sizes No Greater than 50mm.	-/60/60	PFITS FAR 190042 Issue 2

GAP SEALS IN MASONARY WALLS & FLOORS

FireMastic-300™ can be used to provide an FRL of up to -/300/300 for gap seals in masonry walls and floors. Please refer to be below tables on this page for the performance relative to the intended seal size.

BACKING RODS

FireMastic-300™ was tested with foamed polyethylene (PE) backing rods, which controls the depth of seal and fills only part of the gap. PE or similar material rods may be used provided it does not interfere with the required depth of the fire sealant on either face. **Please note: Backing rod is required for all gaps of 10mm or greater.**

250mm Thick Masonry Wall Gap
REF Branz FAR 3821 Issue 4
Up to -/300/300 FRL

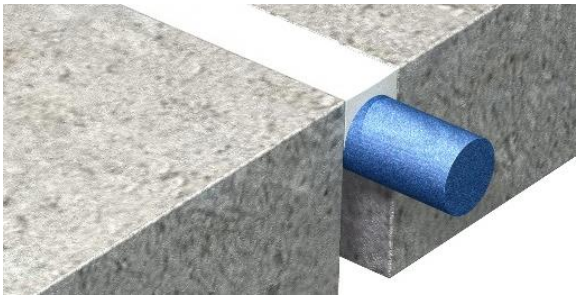
Gap Width (mm)	Seal Depth (mm)	FRL
5	10	-/300/300
10	10	-/300/300
15	10	-/300/300
20	10	-/300/300
25	15	-/300/180
30	15	-/300/180
35	25	-/300/180
40	25	-/300/180
45	25	-/300/180
50	25	-/300/180

250mm Thick Masonry Floor Gap
REF Branz FAR 3821 Issue 4
Up to -/300/180

Gap Width (mm)	Seal Depth (mm)	FRL
5	10	-/300/120
10	10	-/300/120
15	10	-/300/120
20	10	-/300/120
25	15	-/300/60
30	15	-/300/60
35	20	-/300/60
40	20	-/300/60
45	25	-/300/180
50	25	-/300/180

250mm Thick Masonry/Mild Steel Wall Gap
REF Branz FAR 3821 Issue 4
Up to -/300/90 FRL

Gap Width (mm)	Seal Depth (mm)	FRL
5	15	-/300/90
10	15	-/300/90
15	15	-/300/90
20	15	-/300/90
25	15	-/300/90
30	15	-/300/90



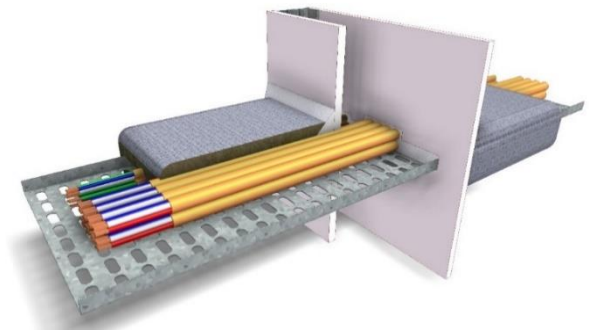
100mm & 150mm Walls and Floor Specimens
REF FAR 3821 Issue 4
Masonry-Masonry and Masonry-Mild Steel

Gap Width (mm)	Seal Depth (mm)	Gap Faces	FRL
20	10	Masonry 100mm Wall	-/120/30
20	10	Masonry/Steel 100mm Wall	-/120/-
20	10	Masonry 150mm Floor	-/240/30
20	10	Masonry/Steel 150mm Floor	-/240/30
50	25	Masonry 100mm Wall	-/120/60
50	25	Masonry 150mm Wall	-/240/90
50	25	Masonry/Steel 150mm Wall	-/240/90

ELECTRICAL SERVICE PENETRATION – POWER CABLES - WALLS

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Power Cables							
Power Cable Bundles	Wall	Min 144mm Thick FR Plasterboard/GIB, Concrete, Masonry	FireMastic-300™	30mm x 30mm Fillet	-/120/120	Bundle of 7 x 3-Core TPS Power Cables	FRT 180403i.1
Power Cable	Wall	Min 96mm Thick FR Plasterboard/GIB, Concrete, Masonry	FireMastic-300™	50mm x 50mm Fillet	-/90/90	Single TPS Power Cable 2C+E	CSIRO COT 2969
Power Cable Bundle + Cable Tray	Wall	Min 96mm Thick FR Plasterboard/GIB, Concrete, Masonry	FireMastic-300™ with P40-MAK Wrap™	50mm x 50mm Fillet	-/90/90	Bundle 3 x Mains Power Cables 3C+E	CSIRO COT 2972
Power Cable Bundle + Cable Tray	Wall	Min 96mm Thick FR Plasterboard/GIB, Concrete, Masonry	FireMastic-300™ with P40-MAK Wrap™	50mm x 50mm Fillet	-/90/90	Bundle 8 x Mains Power Cables 3C+E	CSIRO COT 2972
Power Cable Bundle	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-300™	Annular Gap x 25mm (D)	-/90/90	2 x TPS Power Cables 2C+E	SFC FRT180474.1
Power Cable Bundles Appendix D1 Cable Configuration (AS1530.4: 2014)	Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	FireMastic-300™ BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	FireMastic-300™ to annular gap. P40-MAK Wrap - 300mm Both Sides	-/120/120	Appendix D1 Electrical Cable Configuration: - 1 x 630mm² Single Core - 1 x 185mm² 3C+E - 3 x 6mm² 3C+E - 8 x 16mm² 3C+E	FTC 842
Power Cables	Walls	Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -FR Plasterboard / GIB -Concrete -Solid & Hollow Masonry Walls with Build Up to Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel Build up options - 100mm clearance from perimeter of service: -BOSS Batt -FR Plasterboard	FireMastic-300™ with Thermal Defence Wrap	- 50mm x 50mm fillet both sides - Annular Gap Min 25mm depth both sides Thermal Defence Wrap - 600mm Both Sides	Wall must be minimum 96mm Thick: -/90/90 Or Wall must be minimum 116mm Thick: -/120/120	Cables in general accordance with Appendix D1 as per AS1530.4: 2014 (except 4 x 185mm² and 1 x 630mm²). Cables Include: Up to 2.5mm² 2C+E TPS Power Cable Up to 3 x 6mm² 3C+E Power Cables Up to 8 x 16mm² 3C+E Power Cables	FAS200332 R1.0

The table above only relates to BOSS Fire® solutions relating to the FireMastic-300™ product. For other BOSS Fire® products that offer certified electrical service penetration systems please consult the BOSS Fire® website - bossfire.com



ELECTRICAL SERVICE PENETRATION – DATA / COMMS CABLES & CONDUITS – WALLS & CEILINGS

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Comms / Data Cables							
Comms Cable Bundle	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-300™ & Fire Spring	Annular Gap x 25mm (D)	-/90/90	7 x CAT6 Data Cables	SFC FRT180474.1
Comms Cable Bundle + Cable Tray	Wall	Min 96mm Thick - FR Plasterboard/GIB, Concrete, Masonry	FireMastic-300™ with P40-MAK Wrap™	50mm x 50mm Fillet	-/90/90	D2 Configuration - Bundle 60 Cables - Approx. 14mm Dia. Ea.	CSIRO COT 2970
Comms Cable Bundles Appendix D2 Cable Configuration (AS1530.4: 2014)	Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	FireMastic-300™ to annular gap. P40-MAK Wrap - 300mm Both Sides	-/120/120	Appendix D2 Telecommunications Cable Configuration - Bundle 60 Cables - Approx. 14mm Dia. Ea.	FTC 842
Comms Cables Appendix D2 Cable Configuration (AS1530.4: 2014)	Walls	Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -FR Plasterboard / GIB -Concrete -Solid & Hollow Masonry Walls with Build Up to Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel Build up options - 100mm clearance from perimeter of service: -BOSS Batt -FR Plasterboard	FireMastic-300™ with Thermal Defence Wrap	- 50mm x 50mm fillet both sides - Annular Gap Min 25mm depth both sides Thermal Defence Wrap - 600mm Both Sides	Wall must be minimum 96mm Thick: -/90/90 Or Wall must be minimum 116mm Thick: -/120/120	Cables in general accordance with Appendix D2 as per AS1530.4: 2014 Up to 60 x 50 pair, 0.5mm Telecommunications Cables	FAS200332 R1.0
Conduits (incl cables)							
32mm uPVC Conduit	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-300™ & MaxiCollar 40mm	Flush seal to annular gap.	-/90/90	32mm uPVC Conduit	SFC FRT180474.1
2 x 25mm uPVC Conduits including TPS Power Cables	Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	FireMastic-300™ MaxiCollar 65mm & FireMastic-HPE™ Infill.	FM300 - Flush Seal to annular gap. FMHPE -Infill around conduits.	-/90/90	2 x 25mm uPVC Conduits with 2 x TPS Power Cables 2C+E	SFC FRT180474.1

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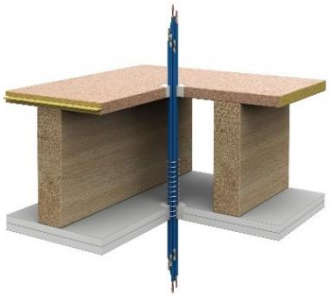
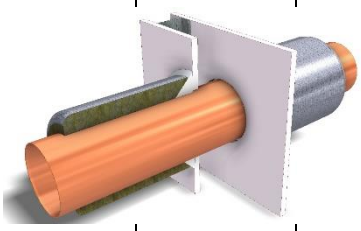


ELECTRICAL SERVICE PENETRATION – POWER & COMMS CABLES - FLOORS

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Power Cables							
Power Cables	Floors	Min 150mm Concrete BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FireMastic-300™ with Thermal Defence Wrap - Double wrapped top side only. -First layer must extend 600mm from face of slab. -Second layer must extend 300mm from face of slab.	- 50mm x 50mm fillet top side only. - Annular Gap Max 20mm Min 25mm depth top side	Min 150mm Concrete	Cables for standard configuration EN1366-3: 2009 including: Power Cables: A1 – PVC/PVC 5mm x 1.5mm² - Approx. Dia 14mm A1 – EPR/PO 5mm x 1.5mm² - Approx. Dia 11.2-14.4mm A1 – XLPE/EVA 5mm x 1.5mm² - Approx. Dia 13mm B – PVC/PVC 1mm x 95mm² - Approx. Dia 18-21mm D1 – PVC/PVC 4mm x 185mm² - Approx. Dia 52mm D2 – EPR/PO 4mm x 185mm² - Approx. Dia 64-80mm D3 – XLPE/EVA 4mm x 185mm² - Approx. Dia 58mm	FAS200332 R1.0
Comms / Data Cables							
Telecommunications Cables	Floors	Min 150mm Concrete BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FireMastic-300™ with Thermal Defence Wrap - Double wrapped top side only. -First layer must extend 600mm from face of slab. -Second layer must extend 300mm from face of slab.	- 50mm x 50mm fillet top side only. - Annular Gap Max 20mm Min 25mm depth top side	Min 150mm Concrete	Cables for standard configuration EN1366-3: 2009 including: Telecommunications Cables: G1 – PVC/- 1mm x 95mm² - Approx. Dia 14.1-17.1mm G2 – PVC/- 1mm x 185mm² - Approx. Dia 19.3-23.3mm D3 – XLPE/EVA 4mm x 185mm² - Approx. Dia 58mm	FAS200332 R1.0

NON-INSULATED METAL PIPES

Element	Substrate	FRL	Service Type	Service Size	Primary Fire Stopping Element	Secondary Fire Stopping Element	Tertiary Fire Stopping Element	Cert Ref
Walls	Min 96mm Thick: FR Plasterboard/GIB, Concrete, Masonry	-/90/90	Copper / Steel Pipe	19mm Ø	FireMastic-300™ - 50mm x 50mm Fillet	P40-MAK Wrap – 300mm Both Sides	N/A	CSIRO COT 2968
Walls	Min 144mm Thick FR Plasterboard, Concrete, Masonry	-/120/120	Galvanised Steel Pipe	34mm OD Pipe	FireMastic-300™ -50mm x 50mm Fillet	N/A	N/A	FRT 180403i.1
Walls	Min 116mm Thick FR Plasterboard, Concrete, Masonry	-/120/120	Galvanised Steel Sprinkler Pipe 50mm	60.3mm OD Pipe	FireMastic-300™ -50mm x 50mm Fillet	N/A	N/A	SFC FRT180472 a.1
Walls	Min 75mm Thick Hebel / AAC	-/120/90	Galvanised Steel Sprinkler Pipe 50mm	60.3mm OD Pipe	FireMastic-300™ -50mm x 50mm Fillet	N/A	N/A	SFC FRT180473 a.1
Walls	Min 96mm (90min FRL) or 116mm (120min FRL): -FR Plasterboard / GIB -Shaftwall / Shaftliner -Concrete -Solid & Hollow Masonry -AFS Walls with localised build up to min 96mm (90min FRL) or 116mm (120min FRL): -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel Build up options - 100mm clearance from perimeter of service: -BOSS Batt -FR Plasterboard -Calcium Silicate Board -Shaftwall / Shaftliner	Wall must be minimum 96mm Thick: -/90/90 Or Wall must be minimum 116mm Thick: -/120/120	Steel, Copper & Iron Pipes	32mm - 80mm Ø	FireMastic-300™ - 20mm x 20mm Surface Fillet - Annular Gap Min 26mm Depth - Both Sides of wall	P40-MAK Wrap - 300mm Both Sides	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS190346 R1.4
				80mm - 159mm Ø	FireMastic-300™ - 20mm x 20mm Surface Fillet - Annular Gap Min 26mm Depth - Both Sides of wall	P40-MAK Wrap - 600mm Both Sides		
Walls	Min 140mm Thick: -Concrete -Solid & Hollow Masonry -AFS Walls with Build Up to Min 140mm: -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel	-/180/120	Steel, Copper & Iron Pipes	32mm - 100mm Ø	FireMastic-300™ - 20mm x 20mm Surface Fillet - Annular Gap Min 26mm Depth - Both Sides of wall *If using pillows: - 20mm Surface Fillet Both Sides - Annular Gap between service filled to full depth.	P40-MAK Wrap - 600mm Both Sides	BOSS FirePillows-240™ Used if needed to fire stop oversize apertures	FAS190346 R1.4
Walls	Min 140mm Concrete Block Wall	-/180/120	Copper Pipes	100mm Ø	FireMastic-300™ - 20mm x 20mm Surface Fillet Both Sides -Applied length wise along pillows. - Annular Gap between service filled to full depth.	P40-MAK Wrap - 600mm Both Sides - Wrapped twice around pipe	BOSS FirePillows-240™	FAS190042 R1.2

For more non-insulated metal pipes in wall solutions refer to the following page.

NON-INSULATED METAL PIPES – WALLS Continued

Element	Substrate	FRL	Service Type	Service Size	Primary Fire Stopping Element	Secondary Fire Stopping Element	Tertiary Fire Stopping Element	Cert Ref
Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	-/120/120	Steel & Copper Pipes	Up to 42mm Ø	BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	P40-MAK Wrap - 300mm Both Sides	FireMastic-300™	FTC 842
Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	-/120/120	Steel Pipes	Up to 60mm Ø	BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	P40-MAK Wrap - 300mm Both Sides	FireMastic-300™	FTC 842
Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	-/120/90	Steel & Copper Pipes	Up to 150mm Ø	BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	P40-MAK Wrap - 600mm Both Sides - Wrapped twice around pipe	FireMastic-300™	FTC 842
Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	-/90/30	Steel Pipes	Up to 220mm Ø	BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	P40-MAK Wrap - 300mm Both Sides	FireMastic-300™	FTC 842
Walls	Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -FR Plasterboard / GIB -Concrete -Solid & Hollow Masonry Walls with Build Up to Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel Build up options - 100mm clearance from perimeter of service: -BOSS Batt -FR Plasterboard	Wall must be minimum 96mm Thick: -/90/90 Or Wall must be minimum 116mm Thick: -/120/120	Steel & Iron Pipes	32mm - 113mm Ø	FireMastic-300™ or FireSilicone-EMA™ - 20mm x 20mm fillet both sides - Annular Gap Min 25mm depth both sides	Thermal Defence Wrap - 300mm Both Sides	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS200332 R1.0
				113mm - 159mm Ø		Thermal Defence Wrap - 600mm Both Sides		
			Copper Pipes	32mm - 54mm Ø		Thermal Defence Wrap - 300mm Both Sides		
				54mm - 159mm Ø		Thermal Defence Wrap - 600mm Both Sides		

The table above only relates to BOSS Fire® solutions using the FireMastic-300™ product. For other BOSS Fire® products that offer certified uninsulated & insulated metal pipe penetration systems please refer to previous page of this TDS or consult the BOSS Fire® website - bossfire.com

NON-INSULATED METAL PIPES – FLOORS

Element	Substrate	FRL	Service Type	Service Size	Primary Fire Stopping Element	Secondary Fire Stopping Element	Tertiary Fire Stopping Element	Cert Ref
Floors	Min 150mm Concrete	-/120/120	Steel, Copper & Iron Pipes	32mm Ø	FireMastic-300™ - 10mm x 10mm Surface Fillet Top Side Only - Annular Gap Min 25mm Depth Both Sides *If using pillows: - 20mm Surface Fillet Both Sides - Annular Gap between service filled to full depth.	P40-MAK Wrap - 300mm Top Side Only	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS190346 R1.4
				32mm - 159mm Ø		P40-MAK Wrap - 600mm Top Side Only		
				32mm - 100mm Ø		P40-MAK Wrap - 600mm Top Side Only - Wrapped twice around pipe	BOSS FirePillows-240™ Used if needed to fire stop oversize apertures	
Floors	Min 150mm Concrete	-/180/120	Copper Pipes	100mm Ø	FireMastic-300™ - 20mm x 20mm Surface Both Sides -Applied length wise along pillows. - Annular Gap between service filled to full depth.	P40-MAK Wrap - 600mm Top Side Only - Wrapped twice around pipe	BOSS FirePillows-240™	FAS190042 R1.2
Floors	Min 130mm Thick Concrete / Comflor® 60	-/120/30	Copper / Steel Pipe	32mm Ø	FireMastic-300™ -10mm x 10mm Fillet + 25mm Deep in Annular Gap	N/A	N/A	SFC FRT180137 d.2
Floors	Min 150mm Concrete	-/120/120	Steel, Copper & Iron Pipes	32mm - 159mm Ø	FireMastic-300™ or FireSilicone-EMA™ - 20mm x 20mm fillet top side only. - Annular Gap Max 20mm Min 25mm depth top side	Thermal Defence Wrap - Double wrapped top side only. -First layer must extend 600mm from face of slab. -Second layer must extend 300mm from face of slab.	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS200332 R1.0
Ceiling	Min 26mm FR Plasterboard - Overall 235mm Ceiling Floor System	-/60/60 -/90/90	Galv Steel Sprinkler Pipe 32mm	42.8mm Ø	FireMastic-300™ -Flush Seal over UniWrap® 1 x Layer fitted to ceiling side outside of wrap.	UniWrap®	Thermal Defence Wrap	SFC FRT180474. 1

The table above only relates to BOSS Fire® solutions using the FireMastic-300™ product. For other BOSS Fire® products that offer certified non-insulated metal pipe penetration systems please consult the BOSS Fire website - bossfire.com

THERMOBREAK INSULATED METAL PIPES

Element	Substrate	FRL	Service Type	Service Size	Primary Fire Stopping Element	Secondary Fire Stopping Element	Tertiary Fire Stopping Element	Cert Ref
Walls	Min 96mm (90min FRL) or 116mm (120min FRL): -FR Plasterboard / GIB -Shaftwall / Shaftliner -Concrete -Solid & Hollow Masonry -AFS Walls with localised build up to min 96mm (90min FRL) or 116mm (120min FRL): -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel Build up options - 100mm clearance from perimeter of service: -BOSS Batt -FR Plasterboard -Calcium Silicate Board -Shaftwall / Shaftliner	Wall must be minimum 96mm Thick: -/90/90 Or Wall must be minimum 116mm Thick: -/120/120	Thermobreak Lagged Steel, Copper & Iron Pipes Lagging Thickness: 30 – 50mm	32mm - 80mm Ø	MaxiCollar™ - Fitted Both Sides FireMastic-300™ - Max 5mm wide x Min 5mm depth flush finish - Both Sides	P40-MAK Wrap - 300mm Both Sides	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS190346 R1.4
				80mm - 159mm Ø	MaxiCollar™ - Fitted Both Sides FireMastic-300™ - Max 5mm wide x Min 5mm depth flush finish - Both Sides	P40-MAK Wrap - 600mm Both Sides		
				32mm - 80mm Ø	UniWrap® (Multiple Layers) - Fitted Both Sides FireMastic-300™ - Max 5mm wide x Min 5mm depth flush finish - Both Sides	P40-MAK Wrap - 300mm Both Sides		
				80mm - 159mm Ø	UniWrap® (Multiple Layers) - Fitted Both Sides FireMastic-300™ - Max 5mm wide x Min 5mm depth flush finish - Both Sides	P40-MAK Wrap - 600mm Both Sides		
Floors	Min 150mm Concrete	-/120/120	Thermobreak Lagged Steel, Copper & Iron Pipes Lagging Thickness: 30 – 50mm	32mm Ø	MaxiCollar™ - Fitted Underside Only FireMastic-300™ - 10mm x 10mm fillet on top side only - Annular Gap Max 5mm wide x Min 25mm depth both sides	P40-MAK Wrap - 300mm Top Side Only	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS190346 R1.4
				32mm - 159mm Ø		P40-MAK Wrap - 600mm Top Side Only		
				32mm Ø	UniWrap® (Multiple Layers) - Fitted Top & Bottom Side FireMastic-300™ - 10mm x 10mm fillet on top side only - Annular Gap Max 5mm wide x Min 25mm depth both sides	P40-MAK Wrap - 300mm Top Side Only		
				32mm - 159mm Ø		P40-MAK Wrap - 600mm Top Side Only		
Walls	Min 100mm Thick: FR Plasterboard/GIB Concrete, Masonry Walls with Build Up to Min 100mm: -Speedpanel or similar	-/120/120	Thermobreak Lagged Steel & Copper Pipes (50mm Lagging)	Up to 80mm Ø	BOSS MaxiCollar™ + BOSS Batt - 2 x 50mm with Ablative Coating or BOSS Flexi-Batt - 1 x 100mm with Flexi-Coat-MAK Coating	P40-MAK Wrap - 300mm Both Sides	FireMastic-300™	FTC 842

More Thermobreak insulated metal pipes solutions continued on the following page.

THERMOBREAK INSULATED METAL PIPES USING THERMAL DEFENCE WRAP

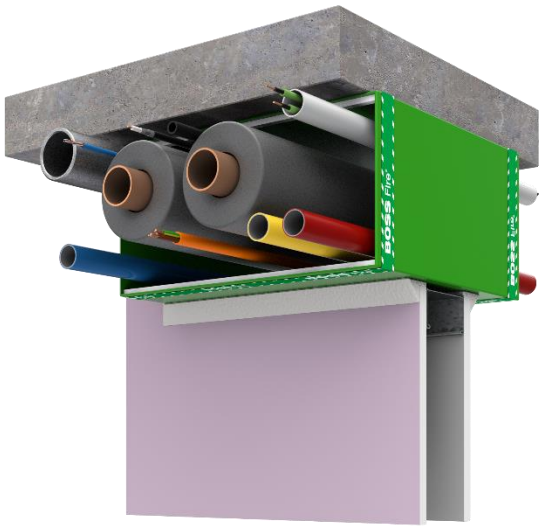
Element	Substrate	FRL	Service Type	Service Size	Primary Fire Stopping Elements	Secondary Fire Stopping Element	Tertiary Fire Stopping Element	Cert Ref
Walls	Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -FR Plasterboard / GIB -Concrete -Solid & Hollow Masonry Walls with Build Up to Min 100mm (90min FRL) or 116mm (120min FRL) Thick: -Speedpanel & Korok -AAC / Hebel -Pronto Panel -Supa Panel Build up options - 100mm clearance from perimeter of service: -BOSS Batt -FR Plasterboard	Wall must be minimum 96mm Thick: -/90/90 Or Wall must be minimum 116mm Thick: -/120/120	Thermobreak Lagged Steel & Iron Pipes Lagging Thickness: 30 – 50mm	32mm - 113mm Ø	UniWrap® (Multiple Layers) - Fitted Both Sides FireMastic-300™ or FireSilicone-EMA™ - 20mm x 20mm fillet both sides - Annular Gap Min 25mm depth both sides	Thermal Defence Wrap - 300mm Both Sides	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS200332 R1.0
				113mm - 159mm Ø		Thermal Defence Wrap - 600mm Both Sides		
			Thermobreak Lagged Copper Pipes Lagging Thickness: 30 – 50mm	32mm - 54mm Ø		Thermal Defence Wrap - 300mm Both Sides		
				54mm - 159mm Ø		Thermal Defence Wrap - 600mm Both Sides		
Floors	Min 150mm Concrete	-/120/120	Thermobreak Lagged Steel, Copper & Iron Pipes Lagging Thickness: 30 – 50mm	32mm - 159mm Ø	UniWrap® (Multiple Layers) - Fitted Both Sides FireMastic-300™ or FireSilicone-EMA™ - 20mm x 20mm fillet top side only. - Annular Gap Max 20mm Min 25mm depth top side	Thermal Defence Wrap - Double wrapped top side only. -First layer must extend 600mm from face of slab. -Second layer must extend 300mm from face of slab.	BOSS Batt - 2 x 50mm Used if needed to fire stop oversize apertures	FAS200332 R1.0

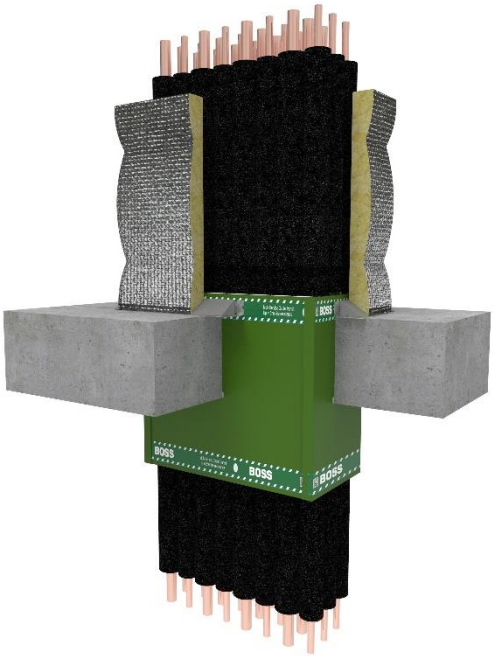
The table above only relates to BOSS Fire® solutions using the FireMastic-300™ product. For other BOSS Fire® products that offer certified insulated metal pipe penetration systems please refer to previous page of this TDS or consult the BOSS Fire® website - bossfire.com

MIXED SERVICE COMBINATIONS

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
Paircoil / Power Cable / Control Cable Bundle	Wall	Min 90mm Thick -13mm FR Plasterboard/GIB + FR Plasterboard/GIB Pattress, Concrete, Masonry	FireMastic-300™ to pattress edges. FireMastic-HPE™ to annular gap	FM300 – Pattress Edges FMHPE – 26mm Deep x Annular Gap	-/60/60	Paircoil (non-rated lagging), TPS Power Cable 2C+E, 2C Data Cable & 20mm uPVC outlet pipe.	CSIRO COT2919
Mixed Service Combinations: Electrical Plumbing HVAC+R	Wall / Floor / Ceilings	Wide variety of flexible and rigid walls, concrete floor slabs and ceiling / floor systems. **For more info refer BOSS Fire Transit Box documentation.**	BOSS Fire® Transit Box with P40-MAK Wrap™. FireMastic-300™ perimeter seal.	Perimeter Seal around box. Refer certification.	-/60/60 -/90/90 -/120/120	Mixed Combinations. **For more info refer BOSS Fire Transit Box documentation.**	Refer specific product technical information.

Please refer directly to BOSS Fire® Multi-Service Transit Box for a wider variety of mixed service combinations including an extensive list of approved electrical, plumbing and HVAC solutions. Whilst BOSS FireMastic-300™ is used as a perimeter seal for the BOSS Fire® Multi Service Transit Box, the range of solutions are too extensive to include in this document. ***For other BOSS Fire® products that offer mixed service bundle solutions, please consult the BOSS Fire® website - bossfire.com***





COMBUSTIBLE / PLASTIC PIPES

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Specific Dimensions	Certification Reference
PEX Pipe							
PEX Pipe 20mm	Wall	Min 90mm Thick FR Plasterboard/GIB + FR Plasterboard/ GIB Pattress, Concrete, Masonry	FireMastic-300™ to pattress edges. FireMastic-HPE™ around pipe	FM300 – Pattress Edges FMHPE – 20mm (w) x 26mm (D)	-/60/60	20mm Ø	CSIRO COT 2917
PEX Pipe 25mm	Wall	Min 118mm Thick - FR Plasterboard/ GIB, Concrete, Masonry	UniWrap® - 2 Layers in Metal Sleeve and FireMastic - 300™	5mm Annular Gap	-/60/60	25mm Ø	FRT 180403c.1
cPVC Pipe							
cPVC Pipe 25mm	Wall	Min 116mm Thick FR Plasterboard/ GIB, Concrete, Masonry	UniWrap® - 2 Layers and FireMastic - 300™	5mm x 5mm Fillet	-/120/60	33mm Ø	CSIRO COT 3042
cPVC Pipe 40mm	Wall	Min 116mm Thick FR Plasterboard/ GIB, Concrete, Masonry	UniWrap® - 2 Layers and FireMastic - 300™	5mm x 5mm Fillet	-/120/90	48mm Ø	CSIRO COT 3041
cPVC Pipe 50mm	Wall	Min 116mm Thick FR Plasterboard/ GIB, Concrete, Masonry	UniWrap® - 2 Layers and FireMastic - 300™	5mm x 5mm Fillet	-/120/90	60mm Ø	CSIRO COT 3044
HDPE Pipe							
HDPE Pipe 75mm	Floor	Min 130mm Thick Concrete / Comflor®60	BOSS Batt Sealed with BOSS Ablative Coating, MaxiCollar™ and FireMastic-300™	10mm x 10mm Fillet + 5mm Deep Annular	-/120/120	75mm Ø	SFC FRT180137b.2
uPVC Pipe							
uPVC Pipe 25mm	Floor	Min 130mm Thick Concrete / Comflor® 60	BOSS Batt Sealed with BOSS Ablative Coating, MaxiCollar™ and FireMastic-300™	10mm x 10mm Fillet + 5mm Deep Annular	-/120/120	33.6mm Ø	SFC FRT180137a.2
uPVC Pipe 40mm	Wall	Min 116mm Thick FR Plasterboard, Concrete, Masonry	UniWrap® - 1 Layer in Metal Sleeve and FireMastic-300™	3mm Annular Gap	-/120/120	48.3mm Ø	SFC FRT180472c.1
uPVC Pipe 40mm	Wall	Min 75mm Thick Hebel / AAC	MaxiCollar™ and FireMastic-300™	11mm x 5mm	-/120/90	48.2mm Ø	SFC FRT180473a.1
uPVC Pipe 50mm	Wall	Min 116mm Thick FR Plasterboard Concrete, Masonry	UniWrap® 2 Layers in Metal Sleeve and FireMastic-300™	5mm Annular Gap	-/120/120	60.3mm Ø	SFC FRT180472c.1
uPVC Pipe 50mm	Wall	Min 75mm Thick Hebel / AAC	MaxiCollar™ and FireMastic-300™	8mm x 5mm Deep	-/120/120	55.7mm Ø	SFC FRT180473b.1
uPVC Pipe 80mm	Wall	Min 75mm Thick Hebel / AAC	MaxiCollar™ and FireMastic-300™	10mm x 5mm Deep	-/120/120	82.1mm Ø	SFC FRT180473b.1
uPVC Pipe 100mm	Floor	Min 130mm Thick Concrete / Comflor®60	BOSS Batt Sealed with BOSS Ablative Coating, MaxiCollar™ and FireMastic-300™	5mm Deep x 6.5mm Annular Gap	-/120/120	109.8mm Ø	SFC FRT180137a.2

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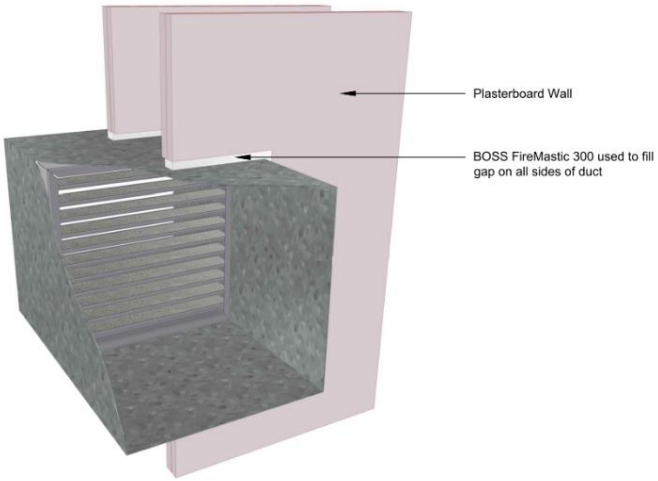
FIRE DAMPER PERIMETER SEALS

FireMastic-300™ can be used to seal around the perimeter of intumescent dampers, fixed either to the face of a wall or in line with the wall. In both situations, FireMastic-300™ may be used to fill any gaps.

Face-fixed Dampers: apply FireMastic-300™ to the section of damper in contact with the wall and to any steel brackets attached to the wall. The damper must overlap the wall by at least 50mm and any gaps must not exceed 5mm.



In-line fixed Dampers: where the damper is fixed in line with the wall, apply FireMastic-300™ all around the edge of the damper. The gap between the edge of the damper and structural opening must not exceed 25mm and the sealant must be filled to the full depth of the damper. This is significantly in excess of any linear gap seal and is therefore able to maintain the fire resistance of the damper.

Notwithstanding the pre-mentioned installation specification, the dampers manufacturers installation instructions must be followed. However FireMastic-300™ may be used in place of the sealant specified.

Service Penetration	Element	Substrate	System Description	Seal Size	FRL	Certification Reference
Linear Gap around Intumescent Dampers	Wall	Perimeter Seal around Intumescent Dampers	FireMastic-300™	Max 5mm Gap for face fixed damper	-/300/300	Branz FAR 3821 Issue 4
Linear Gap around Intumescent Dampers	Wall	Perimeter Seal around Intumescent Dampers	FireMastic-300™	Max 25mm Gap for in-line installation gap	-/300/300	Branz FAR 3821 Issue 4

STORAGE & DISPOSAL

FireMastic-300™ is not affected by external environments. However, for long term storage and ease of installation, FireMastic-300™ should be stored indoors in a dry, frost-free environment below 30˚C. BOSS FireMastic-300™ has an expected shelf life of approximately 24 months.

HEALTH AND SAFETY

To learn more about the safe handling of FireMastic-300™, see the Safety Data Sheet available at bossfire.com

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.

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

FURTHER INFORMATION

For additional technical information on the performance of BOSS FireMastic-300™, other BOSS Fire® products or any other BOSS Fire® related information please contact us on:

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