BLAZEBRAKE™

Fire and Acoustic Rated Acrylic Construction Sealant

Date of Issue: December 3, 2014

DESCRIPTION

BLAZEBRAKE is fire and acoustic rated for sealing residential and office partitions and concrete block

BLAZEBRAKE is a water clean-up, 1-part, flexible Acrylic construction sealant, which does not dry out or crack.

RECOMMENDED USES

- Sealing gaps around pipes, cables, ducts and services, which penetrate **fire-rated** walls and floors
- Sealing joints and penetrations in **acoustic** partitions and walls
- Sealing joints in precast and tilt-up construction
- To prevent the spread of fire and smoke through walls and floors

Refer to Blazebrake fire test certificates for approved fire applications

SUITABLE FOR USE ON

- Concrete
- CSR Hebel® Aerated Autoclaved Concrete
- Concrete Block
- Plasterboard
- Fibre cement

FEATURES AND BENEFITS

- **Fire rated** according to AS1530.4-1990, BS476: Part 20:1987 and AS4072-1.1-1992
- **Acoustic Rated**
- **Flexible and crack resistant** – joint movement ± 15%
- **User Friendly**
  - Easy to dispense in cold weather
  - Low odour
  - Easy tooling
  - Water clean up
  - Sag Resistant
- **OH&S Friendly**
  - Not HAZARDOUS – no isocyanates, no heavy metals, no solvents, no asbestos
  - Low VOC
- **Paintable** with acrylic coatings and oil-based coatings after 24 hours at 20°C.

TYPICAL PROPERTIES

Typical properties after 7 days cure at 25°C and 50% RH

Colour	Grey
Chemical Type	Acrylic co-polymer
Service Temperature	-20°C to + 90°C
Specific Gravity (Density)	Wet 1.6 Kg / L Dry 1.8 Kg / L
Application Temperature	+5°C to + 35°C
Tool Working Time	15 minutes at 25°C
Max. Joint Movement	± 15%
Max. Joint Width	50mm
Full Cure	7 days at 25°C
Acoustic Rating	Rw 56
VOC	17 g / L
Fire Rating	Up to 4 hours*
*Fire Rating Certificates Available on Request Refer to BRANZ Fire Test Certificates 439, 440 and 441	

PRECAUTIONS

- Not for temporary or permanent immersion in water. Prolonged contact with water may result in loss of adhesion.
- Not recommended for exterior applications – use Ramset™ FyreBrake™ Polyurethane Sealant
- Do not use in horizontal joints in decks, patios, driveways or terrace joints where standing water, traffic, high abrasion or physical abuse is encountered
- May not dry in totally confined or air free spaces
- Do not use on surfaces with special protective or cosmetic coating such as mirrors, reflective glass or surfaces coated with Teflon, polyethylene or polypropylene

- Pre-test on absorptive natural stone surfaces such as marble, limestone or granite for staining and/or discolouration
- Do not use in contact with material containing bitumen.

JOINT DESIGN

Consult Joint Design Guide available from Ramset or the web.

Unless otherwise specified, joint design must conform to the following joint width to joint depth relationships.

Joint Width	Joint Depth
6 mm to 10 mm	Equal to Joint Width
10 mm to 20 mm	10 mm
20 mm to 50 mm	Equal to ½ x Joint Width

- Depth must not be less than 6 mm.
- Joint movement (strain) capacity of *BLAZEBRAKE* is ± 15% of nominal joint width. Anticipated joint movement must be less than the joint movement capacity.
- Lap shear joints should have a bead width equal to, or greater than twice the anticipated movement.
- For all applications requiring a high degree of dynamic movement the designed joint width should be at least seven times the total anticipated joint movement.

Failure to observe these recommendations can result in tearing or splitting of the sealant.

APPLICATION INSTRUCTIONS

Joint Preparation
Concrete must be at least 28 days old. Surfaces must be clean, dry, sound and free from laitance, dust, oil, grease, form release agents, surface coatings, adhesives or any agent, substance, material or contaminant that may interfere with the bond or may later affect the sealant.

Remove all dirt, dust, laitance and loose materials by vigorous wire brushing.

Joint faces must be sound, flat and free of surface irregularities. Concrete panel edges to be well-compacted concrete with Class 2 finish according to AS3610.

For any joint faces not meeting these requirements, form a fresh joint surface by saw cutting or refacing with a cement mortar.

For a neat finish, cover the face edges of the joint with masking tape before applying *BLAZEBRAKE*.

To avoid three-sided adhesion, install a bond breaker, such as Ramset Backer Rod in the joints prior to application of *BLAZEBRAKE*.

Priming not usually required.

If surface quality is in doubt, apply a bead of sealant and allow to dry, to test adhesion before committing to the whole job.

BLAZEBRAKE is suitable for use on CSR Hebel® AAC without primer.

Application
Ensure surface and sealant temperatures are greater than 5°C. Apply *BLAZEBRAKE* sealant in a continuous operation using positive pressure to properly fill and seal the joint. Tool the sealant to force it against the back-up material and onto the joint surfaces to promote adhesion. Use a tool with a convex profile to keep the sealant within the joint.

Wipe excess sealant from all surfaces with a damp cloth before it dries.

If masking tape is used, remove it before sealant skins.

Tooling Time: Complete tooling within 15 minutes of application.

Skinning Time: 30 Minutes @ 25°C

Curing: Drying depends on temperature, humidity and cross-section dimensions when installed Typically full cure is achieved within 7 days.

CLEAN UP
Clean up uncured material and equipment immediately after use using water. Remove dried *BLAZEBRAKE* by scraping or other mechanical means. Caution: Scraping may damage the substrate.

PACK SIZES AND ORDER NUMBERS

Grey 300 ml cartridge	BLBRGYC
Grey 600 ml Sachet	BLBRGYS

STORAGE
Store between 5°C and 30°C. Shelf life is 1 year in original unopened container.

HEALTH AND SAFETY
- *BLAZEBRAKE* is water-based so fumes and odour are minimal.
- Avoid contact with the skin, eyes.
- Wear protective gloves when using.
- For more detailed information refer to the Material Safety Data Sheet.

FIRE – TRANSPORT & STORAGE

BLAZEBRAKE is not flammable for transport and storage.

ESTIMATING CHART

Lineal Metres per 960 g (600 ml) Sachet (Approx)

Joint Depth	Nominal Joint Width (mm)							
	6	8	10	12	15	20	25	50
6 mm	16.6	--	--	--	--	--	--	--
8 mm	x	9.4	--	--	--	--	--	--
10 mm	x	x	6.0	5.0	4.0	3.0	--	--
12.5 mm	x	x	x	x	x	x	1.9	--
25 mm	x	x	x	x	x	x	x	0.5

Lineal Metres per 450 g (300 ml) Cartridge (Approx)

Joint Depth	Nominal Joint Width (mm)							
	6	8	10	12	15	20	25	50
6 mm	8.3	--	--	--	--	--	--	--
8 mm	x	4.7	--	--	--	--	--	--
10 mm	x	x	3.0	2.5	2.0	1.5	--	--
12.5 mm	x	x	x	x	x	x	1.0	--
25 mm	x	x	x	x	x	x	x	0.3

Coverage based on nominal dimensions

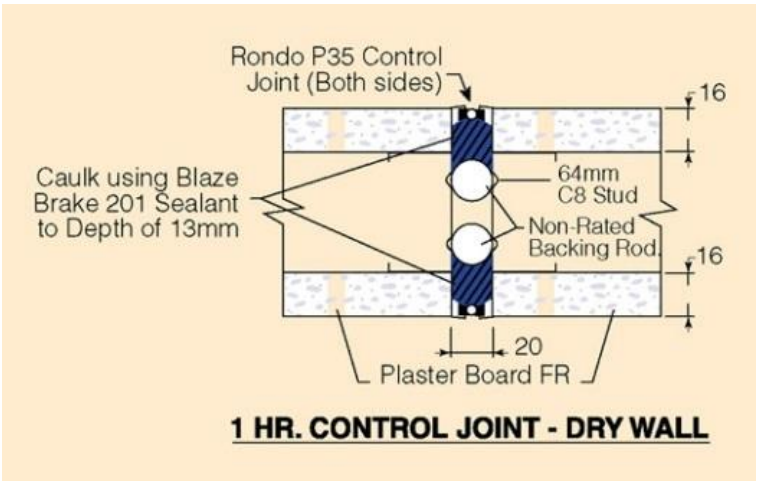
"--" Shallow joint. Risk of sealant tearing. Make joint deeper
"x" Joint depth > width. Risk of sealant tearing. Adjust depth with backing rod

Refer above for correct joint design details

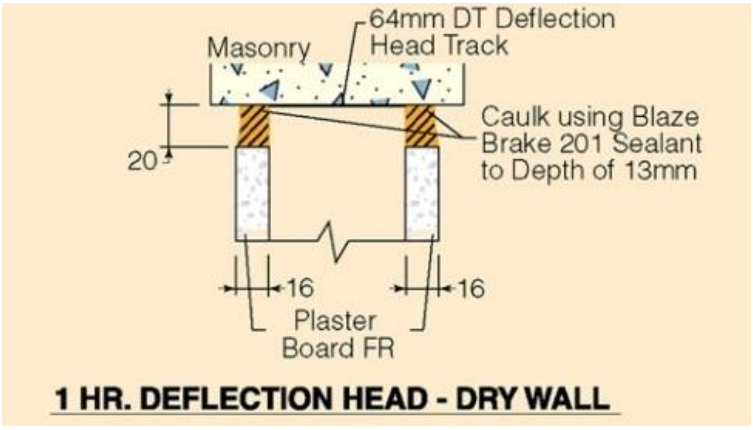
BLAZEBRAKE Approved Fire Rating Configurations

Before using *BLAZEBRAKE* for Fire Rated applications, refer to full fire test reports available from Ramset™ or www.ramset.co.nz and www.ramset.com.au

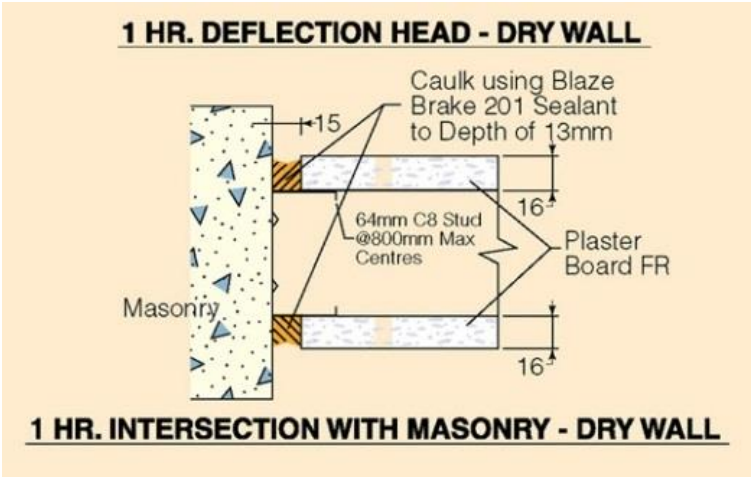
BLAZEBRAKE Approved Configurations for **1 hour** Fire Rated Sealing of Joints and Penetrations in Fire Rated Plasterboard to AS1530.4 –1990 (Refer BRANZ Fire Test Certificate 439)



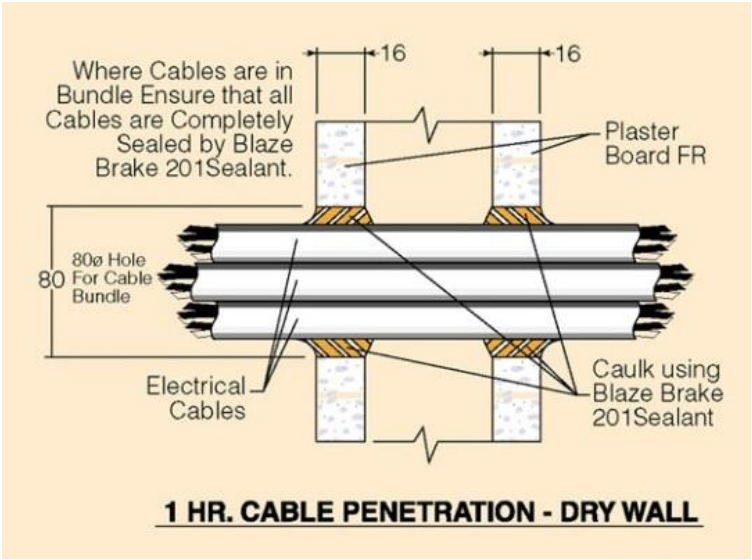
Fire Test Report	FP3698
FRL	-/60/60
Plasterboard Thickness	16 mm
Sealant Thickness	13 mm
Joint Width	20 mm



Fire Test Report	FP3698
FRL	-/60/60
Plasterboard Thickness	16 mm
Sealant Thickness	13 mm
Joint Width	20 mm

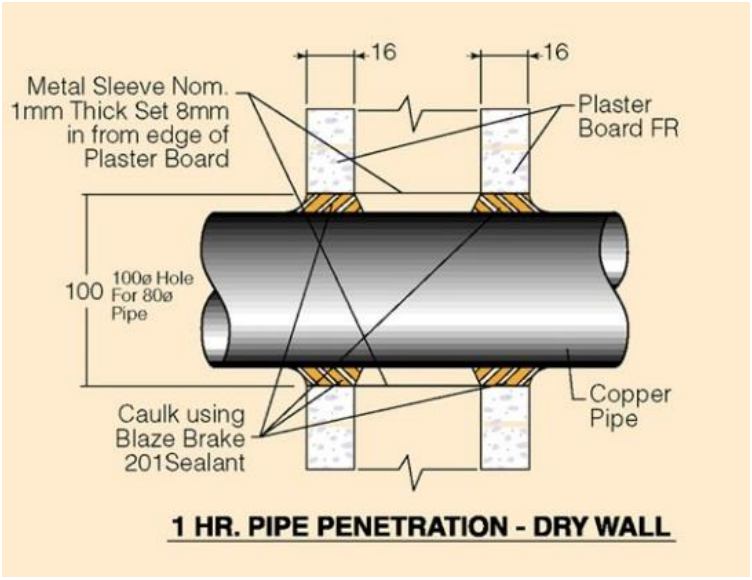


Fire Test Report	FP3698
FRL	-/60/60
Plasterboard Thickness	16 mm
Sealant Thickness	13 mm
Joint Width	15 mm



1 HR. CABLE PENETRATION - DRY WALL

Fire Test Report	FP3698
FRL	-/60/60
Plasterboard Thickness	16 mm
Sealant Thickness	16 mm
Cable Bundle Diameter	65 mm
Penetration Diameter	80 mm



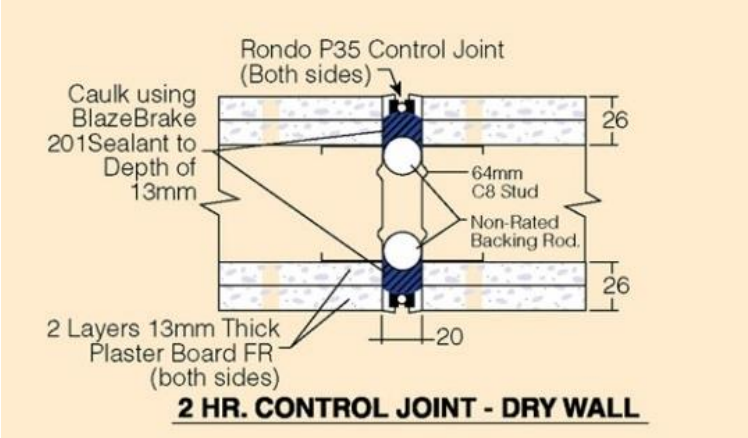
1 HR. PIPE PENETRATION - DRY WALL

Fire Test Report	FP3698
FRL (No Radiation Screen)	-/60/0
FRL (Radiation Screen)	-/60/60
Plasterboard Thickness	16 mm
Sealant Thickness	16 mm
Pipe Outer Diameter	76 mm
Penetration Diameter	100 mm

To obtain -/60/60 FRL, fit 240 mm diameter x 450 mm long metal mesh radiation screen concentrically around copper pipe on non-fire side

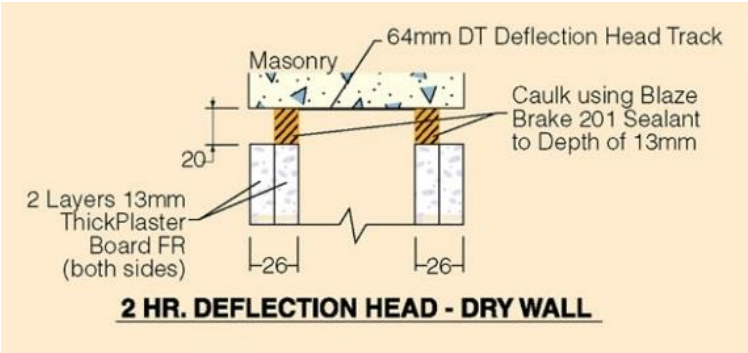
Metal Sleeve: Minimum 0.6 mm galvanised steel sleeve 100 mm diameter x 80 mm long

BLAZEBRAKE Approved Configurations for **2 hour** Fire Rated Sealing of Joints and Penetrations in Fire Rated Plasterboard to AS1530.4 –1990 (Refer BRANZ Fire Test Certificate 440)



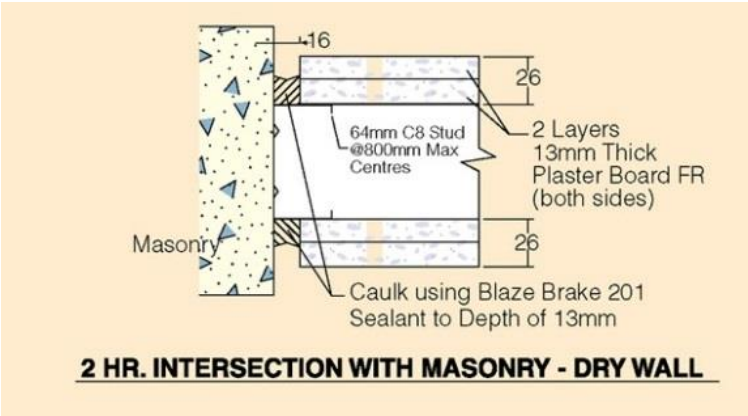
2 HR. CONTROL JOINT - DRY WALL

Fire Test Report	FP3699
FRL	-/120/90
Plasterboard Thickness	26 mm
Sealant Thickness	13 mm
Joint Width	20 mm



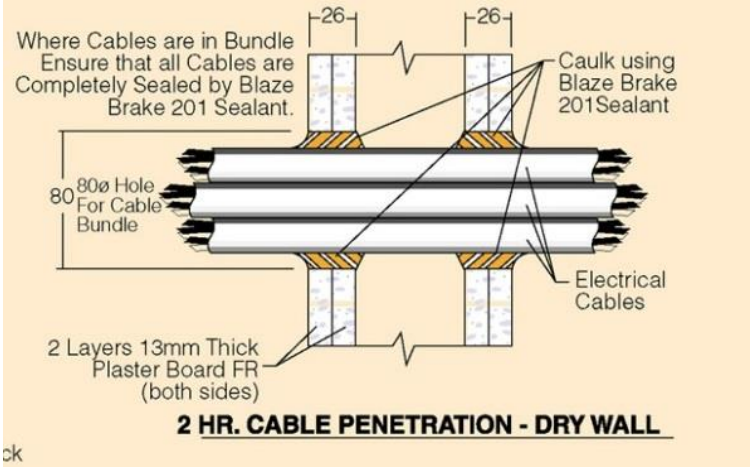
2 HR. DEFLECTION HEAD - DRY WALL

Fire Test Report	FP3699
FRL	-/120/90
Plasterboard Thickness	26 mm
Sealant Thickness	13 mm
Joint Width	20 mm



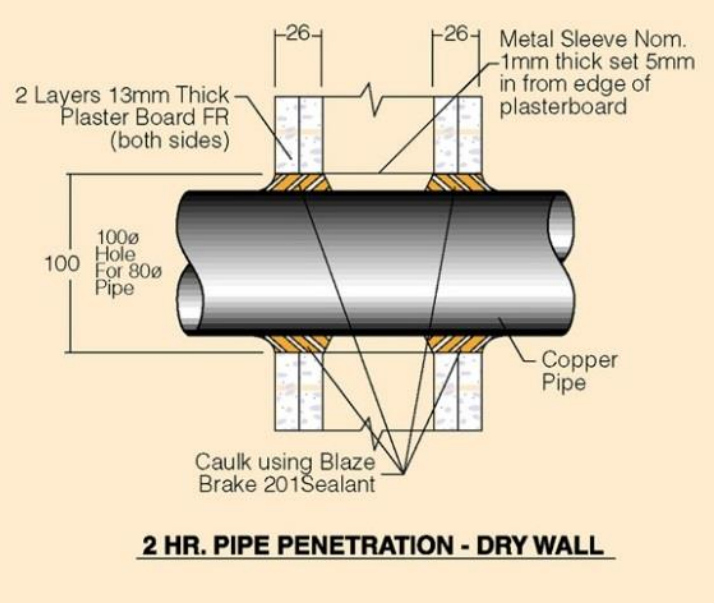
2 HR. INTERSECTION WITH MASONRY - DRY WALL

Fire Test Report	FP3699
FRL	-/120/120
Plasterboard Thickness	26 mm
Sealant Thickness	13 mm
Joint Width	16 mm



2 HR. CABLE PENETRATION - DRY WALL

Fire Test Report	FP3699
FRL	-/120/60
Plasterboard Thickness	26 mm
Sealant Thickness	26 mm
Cable Bundle Diameter	65 mm
Penetration Diameter	80 mm



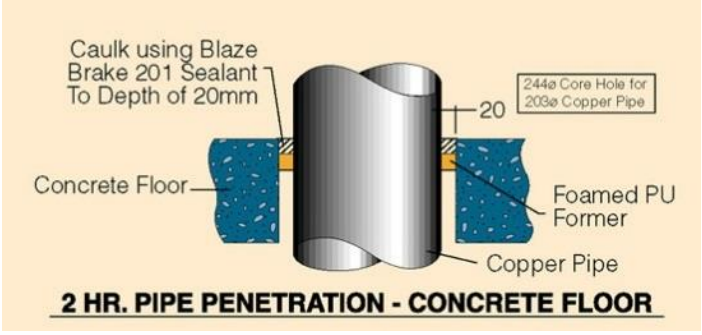
2 HR. PIPE PENETRATION - DRY WALL

Fire Test Report	FP3699
FRL (No Radiation Screen)	-/120/0
FRL (Radiation Screen)	-/120/120
Plasterboard Thickness	26 mm
Sealant Thickness	26 mm
Pipe Outer Diameter	80 mm
Penetration Diameter	100 mm

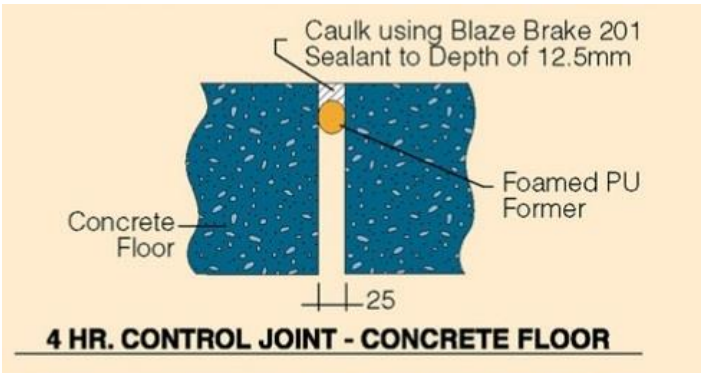
To obtain -/120/120 FRL, fit 240 mm diameter x 450 mm long metal mesh radiation screen concentrically around copper pipe on non-fire side

Metal Sleeve: Minimum 0.6 mm galvanised steel sleeve 100 mm diameter x 80 mm long

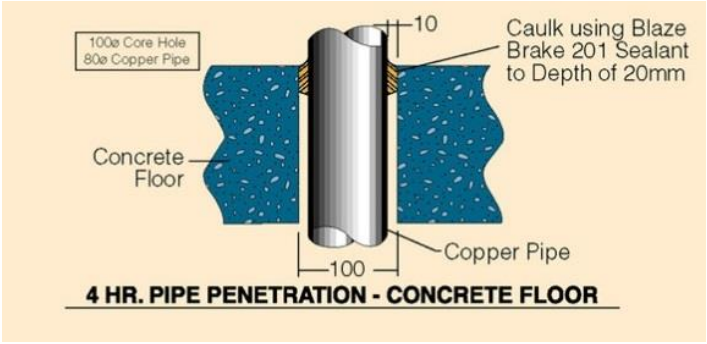
BLAZEBRAKE Approved Configurations for Fire Rated Sealing of Joints and Penetrations in Concrete Floors to AS 1530.4 – 1990 (Refer BRANZ Fire Test Certificate 441)



Fire Test Report	FP3701
FRL (No Radiation Screen)	-/120/0
Concrete Thickness	180 mm
Sealant Thickness	20 mm
Pipe Outer Diameter	203 mm
Penetration Diameter	244 mm

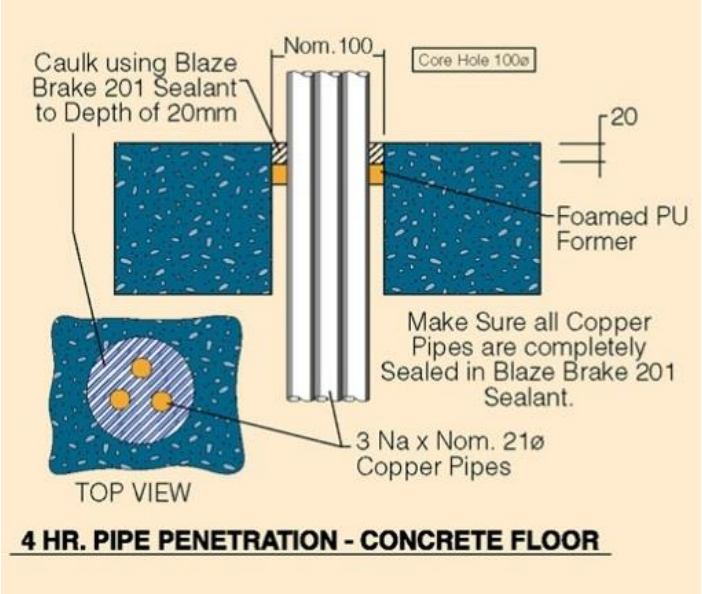


Fire Test Report	FP3701
FRL	-/240/240
Concrete Thickness	170 mm
Sealant Thickness	12.5 mm
Joint Width	25 mm

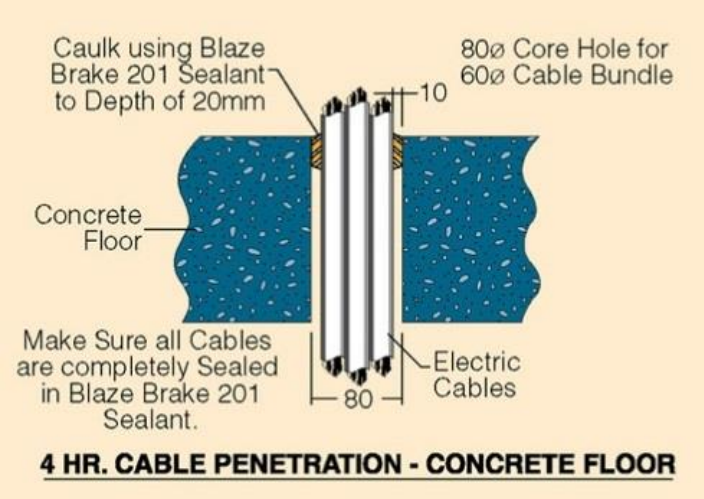


Fire Test Report	FP3700
FRL (No Radiation Screen)	-/240/30
FRL (With Radiation Screen)	-/240/240
Concrete Thickness	170 mm
Sealant Thickness	20 mm
Pipe Outer Diameter	80 mm
Penetration Diameter	100 mm

To obtain -/240/240 FRL, fit 240 mm diameter x 450 mm long metal mesh radiation screen concentrically around copper pipe on non-fire side



Fire Test Report	FP3701
FRL (No Radiation Screen)	-/240/0
Concrete Thickness	180 mm
Sealant Thickness	20 mm
Pipe Outer Diameter	21 mm x 3
Penetration Diameter	100 mm



Fire Test Report	FP3700
FRL	-/240/120
Concrete Thickness	170 mm
Sealant Thickness	20 mm
Cable Bundle Diameter	60 - 65 mm
Penetration Diameter	80 mm

BLAZEBRAKE Approved Configurations for Fire Rated Sealing of Pipe Penetrations in Concrete Floors to AS 1530.4 – 1990 (Refer BRANZ Fire Assessment Report FAR3318)

Concrete Depth: 170 mm

Pipe Specimen Nominal Diameter	FRL	Radiation Guard	Sealant Width x Depth	Backing Rod
Copper 20 mm	-/240/240	Yes	10 x 20 mm	No
Copper 20 mm	-/240/30	No	10 x 20 mm	No
Copper 25 mm	-/240/240	Yes	10 x 20 mm	No
Copper 25 mm	-/240/30	No	10 x 20 mm	No
Copper 32 mm	-/240/240	Yes	10 x 20 mm	No
Copper 32 mm	-/240/30	No	10 x 20 mm	No
Copper 40 mm	-/240/240	Yes	10 x 20 mm	No
Copper 40 mm	-/240/30	No	10 x 20 mm	No
Copper 50 mm	-/240/240	Yes	10 x 20 mm	No
Copper 50 mm	-/240/30	No	10 x 20 mm	No
Copper 65 mm	-/240/240	Yes	10 x 20 mm	No
Copper 65 mm	-/240/30	No	10 x 20 mm	No
Copper 100 mm	-/120/0	No	20 x 20 mm	Yes
Stainless Steel 316 200 mm x ≤ 2.2 mm wall thickness	-/120/0	No	20 x 20 mm	Yes

Radiation guard: Metal mesh radiation screen concentrically around copper pipe on non-fire side. Diameter at least 3 times pipe diameter and at least 450 mm long.