

FIRECRUNCH INSTALLATION MANUAL - INTERNAL WALLS

FRL 60/60/60 to FRL 90/90/90

NATA Labs Australia Fire Tested Systems AS1530.4 and more



FIRE PROOF



FLOOD PROOF



IMPACT RESISTANT



TERMITE PROOF



MOULD & BACTERIA PROOF



FireCrunch

FireCrunch offers a new era in eco-friendly and 95% carbon neutral building products and building materials. FireCrunch is a composite of steel processing derivatives bonded with integral magnesia mix composite materials and processed volcanic scoria. Finely carbonated with a specified level of magnesium sulphate IP which eliminates any metal corrosion found in regular MgO boards which all have a metal corrosive chloride bonder (Mgchl₂). FCA also uses HD fibre mesh composite sheetings which provides its enhanced strength. FireCrunch has no asbestos, chloride, formaldehyde or any toxic derivatives, toxic chemicals of VOC that can cause harm to health. FireCrunch is one board with many applications. See "Safety Data Sheet K Product Range FireCrunch" under [Manuals & Drawings](#) on web site. See "NATA Labs Non-Asbestos Non-Chloride Certificate" under [Certifications](#) on web site.

Key Features

The fine, densely bonded, mineral fibre structure (1.15g/cm³) ensures excellent machining and working properties using normal woodworking equipment or hand tools. In addition, the smooth face surface provides an ideal base once primed and sealed with recommended products for paint finishing (class 4 to 5 top rate commercial) with all industrial and domestic coatings. The back surface of FireCrunch is characterised by a coarse, wire screen texture which makes it ideal for rendering and tiling when reversed, although both sides respond equally. FireCrunch is available in a range of accurately dimensioned sheet sizes and in thicknesses but requires 10mm for ceilings over 300mm batten centres.

Australian BCA Standards Certification

- ★ BCA Volume One 2014: C1.8 Lightweight Construction, C1.10 Fire Hazard Properties and C1.12 Non-Combustible Components, including state variations for NSW.
- ★ BCA Volume Two 2019: Part 3.5.3.3, Fibre Cement Planks and Weatherboard Cladding.
- ★ BCA Volume Two 2019: Part 3.5.3.4, Fibre Cements Sheet Wall Cladding.
- ★ BCA Volume Two 2019: Part 3.5.3.5, Eaves and Soffits Linings.
- ★ BCA Volume Two 2019: Part 3.7.1, Fire Separation for FRL, including state variations in SA. (Refer to limitation e).
- ★ BCA Volume Two 2019: Part 3.7.4, Bushfire areas to Part 3.7.4.0 and 3.7.4.1, incl. state variations NSW, Qld, SA, Tas.
- ★ BCA Volume Two 2014: Part 3.8.6, Sound Insulation, incl. state and territory variations in NT.

Fire Properties

FireCrunch is totally fire resistant. It will not burn in a fire storm.

FireCrunch boards also meet the requirements of the following methods for fire tests on building materials.

- ★ AS1530.4 - Fire resistant test to building material - relative standard.
- ★ AS1530.4 - Components and structures (FRL 60/60/60, FRL 90/90/90 - FRL .../120/120)
- ★ AS1530.1 - Non-combustibility test for materials.
- ★ AS3837 - Simultaneous determination of ignitability, flame propagation, heat release and smoke release.
- ★ AS1530.4 - Fire resistance test of elements of construction.
- ★ AS1530.8.1 - Tests on elements of construction buildings exposed to bushfire attack - Radiant heat and small flaming sources.
- ★ AS1530.8.2 - Tests on elements of construction buildings exposed to simulated bushfire attack - Radiant heat and large flaming sources.
- ★ Complies under AS1530.4 Registered Fire Engineers Test Assessment Report (NCC) and Blue Mountains City Council NSW Chief Surveyors Assessed Approval 2019/20.

FireCrunch is applicable in BAL Low, 12.5, 19, 29, 40 or FZ (Flame Zone - over 50Kw m² irradiation, 1200°C) regulation areas and meets the AS3959-2019 mods requirements, when used to protect timber framing. See [Certifications](#) on web site.

Product Applications

FireCrunch has a very wide range of uses for residential, commercial and industrial buildings, schools, hospitals, Government and social housing, utility buildings etc. The board has additional applications in the fire safety, electrical switchboard backing blocks, electrical wiring channels and internal electrical risers in multi-story and commercial buildings.

INTERNAL APPLICATIONS

Internal walls, ceilings, floor sub base, tile backer, counter tops, kitchen furniture, built-in wardrobes, hot areas.

WET AREA APPLICATIONS

Bathrooms, shower recess, kitchen - sealed correctly. FireCrunch is suitable for any wet areas or humidity prone areas. FireCrunch is mould resistant and will not degrade in standing water or flood conditions it remains inert and can simply be dried, re-plaster set and repainted.

EXTERIOR APPLICATIONS

Wall boards, soffits, lining or decking assessed for AS3959 BAL Flame Zone Regulation. Must be fully weather sealed. Can be painted, papered, tiled, rendered or veneered.

Environmental Properties

During the manufacturing process, in carbonation, FireCrunch draws back 90% of the CO2 created in manufacturing and makes it a virtually carbon neutral product. FireCrunch is a 45% recycled waste product and is 100% recyclable. See FireCrunch web site for more environmental properties.

Storage & Handling

Store flat, under cover on a horizontal pallet or on supports spaced at not more than 450mm centres. Must be kept under cover away from all weather conditions before use. Always handle with at least one person at each end of the board. With hands, apart, lift the board and tilt to prevent sagging.

Occupational Health & Safety

The work involved in sawing, drilling, sanding or otherwise treating FireCrunch sheets, should minimise dust generation and be carried out in a well-ventilated area. Use an extractor on power bench saws with replaceable filter or disposable half respirator to avoid respiratory problems, and wear long sleeved shirts. Industrial safety glasses or non-fogging goggles should also be worn.

What Tools Do I Need?

No special tools are required to use FireCrunch. It can be sawn, drilled, screwed and planed using timber tools.

Cutting & Machining

FireCrunch is easy to work and machine with normal woodworking tools and equipment. Cut sheets with a fine tooth handsaw or power saw. Edges may be trimmed with a smoothing plane, power plane or sandpaper. Where holes are required, clean cutter bits or twist drills are satisfactory. Woodworking shapers, spindle moulders and high speed routers may be used to shape or mould the edges of FireCrunch. Tungsten carbide tipped cutters are preferred for long production runs.

General Fixing & Installation Recommended Board Thickness

Board Thickness	Recommended Use	Edges
10mm Cladding SE/TE	K-Clad Walls and Ceilings (Interior & Exterior)	SQ, Recessed
12mm Groove Board	K-Wall (Weatherboard), BAL FZ	Shiplap
16mm Decking Board	K-Deck (TG16 Exterior Decking) BAL FZ	TG
19mm Flooring	K-Floor/K-Roof TG19 BAL FZ	TG

AS1530.4/2014-2029

Interior/Exterior Lining

Position fasteners a min. of 50mm from corners and min. 12mm from edges. All facing surfaces must be pre-sealed with Murobond MP Primer (see [Recommended Products](#) web site) and finished with Dulux based paints for fine finish. Stud adhesives should only be used for board positioning, not fastening. Installed boards must be screw fastened.

Timber Framing

General wall installation to conventional wood or steel frame construction. Use self countersunk ribbed head screws spaced 200mm on centre at panel edges and intermediate framing battens spaced up to 300mm centres for field of sheets.

Steel Framing

General wall installation to conventional min. 20GA Bluescope steel or similar metal frame construction. Use min. No. 8-18 x 8.5mm suitable length long, ribbed head bugle corrosion proof screws spaced 200mm centres at panel edges and intermediate framing battens, spaced up to 300mm centres (ceilings) depending on use.

Joint Treatment

FireCrunch TE recessed edge boards can be fastened at a butting board edge but must be centred on the backing battens at max. 300mm centres.

IMPORTANT: Do not fire seal the plaster set butt joints on internal cladding work.

Gun 3 beads of fire sealant down the backing batten face, use Bostik Fire Ban or any AS1530.4 approved fire sealant. Do not gun fire sealant between the boards on internal plaster set walls.

Screwing

All screws must be corrosion proof in all areas, stainless steel or galvanised. For screwing FireCrunch to timber or steel framing, we recommend using 8-10 self countersunk ribbed head Class 2/3 needle point screws (depending on timber hardness). Use self countersunk corrosion proof winged screws for steel framing. Max. depth between surface of screw head and surface of FireCrunch should not be more than 2-3mm (10, 12, 16 and 19mm boards).

Recommended screw sizes

Board Thickness	Screw Length	Board Thickness	Screw Length
10mm & 12mm	30mm	16mm & 19mm	45-50mm



SEALER + UNDERCOAT + PAINTING OR RENDERING:

For both internal/external paint application. Failure to follow these procedures and use the specified products will void the warranty. See [Recommended Products](#) on web site.

- STEP 1 Ensure all surfaces are clean and dry to max 10% sheet hydration.
- STEP 2 Apply one coat of the **Murobond MP Primer**.
- STEP 3 After Murobond MP primer is dry to manufacturer's specification, apply the recommended **undercoat** for your finish top coat paint brand.
- STEP 4 Apply two coats of **water-based acrylic paint**.

Murobond MP Primer is obtainable on order from FireCrunch Australia.

DO NOT ALLOW FireCrunch boards to get wet or hydrate over 10% BEFORE sealing with Murobond MP primer.

Internal Fire Wall

AS3837 (Group 1) C10 and C12.
Applicable for NATA Labs tested
AS1540.3, AS1530.8.2, BAL 29, 40 or FZ.

10mm K-Clad FireCrunch and adding a
90mm R2.5 glass wool fire batt, you
achieve a fire rated wall **FRL 90/90/90 in
steel framing** and **FRL 60/60/60 in
timber framing** (see *FireCrunch Technical
Installation Manual* under *Manuals &
Drawings* on web site).



Fixing Notes

- ★ FireCrunch sheets can be installed horizontally or vertically, however vertical installation is required for load bearing walls ***
- ★ Timber or steel framed walls, floors and ceilings are to be constructed strictly in accordance with the Building Code of Australia and all relevant standards.
- ★ Firmly hold the boards against the frame while fasteners are positioned and, where possible, start from the centre and work to the ends and edges.
- ★ Fasten to the studs, joists and rafters of **timber** framed buildings min. 15mm from the edge and 50mm from the corner of boards and staggered at a max. of 200mm centres. Fasten boards at a maximum of 200mm centres to top and bottom plates and at a maximum of 300 mm centres in the field of sheets.
- ★ Fasten to the studs joists and rafters of **steel** framed buildings min. 15mm from the edge and 50mm from the corner of boards and staggered at a max. of 200mm centres. Fix at a maximum of 300mm centres in the field of sheets.
- ★ Fasteners should finish with the head just below the surface of the FireCrunch board.
- ★ The boards are strong but care should be taken not to damage the core or face.
- ★ The horizontal and vertical joints between FireCrunch sheets should be sealed with a Bostik Fire Ban or suitable water resistant sealant before tiling.
- ★ TE10 recessed edge 10mm board must be paper tape plaster set jointed before applying Murobond MP primer. See *Recommended Products* on web site.

Allow a 6-10mm gap at the top edge of wall/ceiling junctions

Ensure all electrical, plumbing and insulation work has been completed before sheeting the other side of the wall

See CSIRO fire test certificate specifications: *Certifications* on web site

Use recommended adhesive at 200mm max. centres and at least 200mm from fastenings. Stud adhesive must not be used instead of screws for securing the board.

Tape and set joints with approved jointing compounds

*** IMPORTANT NOTE:

In load bearing fire walls, board must be fixed vertically - no exceptions.

Fasteners at 200mm max. centres and staggered on edges

Allow a 6-10mm gap at the bottom edge of wall/floor junctions

What type of fastener should I use?

STEEL FRAMES

We recommend using self countersunk corrosion proof ribbed head screws.



10 gauge, 16 TPI, 25mm, CSK rib, X Drive #1, DP

TIMBER FRAMES

We recommend using 8-10 self countersunk ribbed head Class 2/3 needle point screws (depending on timber hardness). Maximum depth between surface of screw head and surface of FireCrunch board should not be more than 3mm.



Flood Prone Areas

FireCrunch does not retain water and will not swell so if a room has been flooded, the FireCrunch board can simply be unscrewed and lifted to allow the board and frame to dry and repairs to be done and then screwed back into place and refinished. For this reason, if you are installing walls in areas that are flood prone, it is recommended not to use adhesives to hold boards for fixing.

FireCrunch must be sealed at installation with Murobond MP primer. Adhesive daubs can be used at 150mm min. intervals.

Do not use adhesives in flood prone areas.

Screws

Steel frame self countersunk ribbed head screws. Wood frame 8-10 self countersunk ribbed head Class 2/3 screws.

Fix at every stud along sheet centre line.

Butt joints: Fix at 200mm centres.

