Fire Crunch

Australian Certified Building Solutions

FIRECRUNCH INSTALLATION MANUAL - **INTERNAL WALLS**

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

NATA Labs Australia Fire Tested Systems **AS1530.4** and more

sales@firecrunch.com.au call today 1300 933 102

NOTE: FCA ref, is FireCrunch Australia

FIRE TESTED BY NATA / CSIRO & OTHERS

NATA CERTIFIED NO METAL CORROSIVE CHLORIDE $MgSO_4$ Sulphate Board

FIRECRUNCH INSTALLATION - **INTERNAL WALLS**

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 providesits 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 SDS web site. See NATA certificates of Content compliance, web site under certification firecrunch.com.au/certification

KEY FEATURES

The fine, densely bonded, mineral fibre structure (1.15g /cm3) of ensures excellent machining and working proper ties 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 Two 2014: Part 3.5.3.4, Fibre cement sheeting
- BCA Volume One 2014: C1.8 Lightweight Construction, C1.10 Fire hazard properties and C1.12 non-combustible components, including state variations for NSW AS/1530.1 National BCA
- BCA Volume Two : Part 3.5.3.3, Fibre Cement Planks and Weatherboard Cladding.
- BCA Volume Two : Part 3.5.3.4, Fibre Cements Sheet Wall Cladding.
- BCA Volume Two : Part 3.5.3.5, Eaves and Soffit Linings.
- BCA Volume Two : Part 3.7.1, Fire separation for FRL, including state variations for SA.
- BCA Volume Two : Part 3.7.4, Bushfire areas to Part 3.7.4.0 and 3.7.4.1, including state variations .

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:

- AS/1530.4 - Fire resistance test to building material – relative standard.
- AS/1530.4 - Components and structures (FRL 60/60/60, FRL 90/90/90- FRL-120/120) .
- AS/1530.1 - Non Combustibility test for materials.
- AS/3837: - Simultaneous determination of ignitability , flame propagation, heat release and smoke release..
- AS/1530.4 - Fire-resistance test of elements of construction.
- AS/1530.8.1- Tests on elements of construction buildings exposed to bushfire attack - Radiant heat and small flaming sources.
- AS/1530.8.2- Tests on elements of construction for buildings exposed to simulated bushfire attack - Large flaming sources.

Complies under AS.1530.4 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 (Fire Zone - over 50Kw m2 irradiation, 1200°C) regulation areas and meets the AS/3959 /(2019) Mods requirements, when used to protect timber framing. WEB SITE CERTIFICATIONS.

PRODUCT APPLICATIONS

FireCrunch has a very wide range of uses for residential, commercial and industrial buildings, schools, hospitals, Government & social housing, utility buildings etc.The board has additional applications in 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 AS/ 3959 BAL Fire 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 mfg and makes it a virtually carbon neutral product. FireCrunch is a 45% recycled waste product 100% recyclable. See the FireCrunch website 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 AND 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 USE

Board Thickness	Recommended Use	Edges
12mm	INT/ EXT Fire proof weather board	Ship Lap
10mm	Walls (internal and external), Ceilings	Square, Recessed
16mm	External Walls, Floors, Decks, Roofing	Tongue & Groove
19mm	External Walls, Floors, Decks, Roofing	Tongue & Groove

INTERIOR/EXTERIOR LINING

Position fasteners a minimum of 50mm from corners and min. 12mm from edges. All facing surfaces must be pre-sealed with **Aquacrunch (Klass Si) VAPOUR PERMEABLE Primer sealer** (see recc products web site) and finished **Dulux** paints 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 countersink ribbed head screws spaced 200mm on centre at panel edges and intermediate framing battens members spaced up to 300mm centres for field of sheets.

STEEL FRAMING General wall installation to conventional Min 20 GA Bluescope steel or similar metal frame construction. Use minimum 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 (ceilings) centres (depending on use).

JOINT TREATMENT FireCrunch TE recessed edge boards can be fastened at a butting board edges but must be centred on the backing battons at max 300 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 AS/1530.4 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, opportunity stainsteel or galvanised.
For screwing FireCrunch boards to steel framing , we recommend using self countersinking ribbed head screws.
For screwing FireCrunch boards to timber or steel framing. We recommend using 8-10 self countersinking ribbed head screws Class 2 / 3 needle point screws. (Depending on timber hardness). (Use self countersinking corrosion proof winged screws for STEEL framing .Maximum depth between surface of screw head and surface of FireCrunch should not be more than 2 /3mm (10,12 ,16 and 19mm board).

Recommended Screw sizes

Board Thickness	Screw Length	Board Thickness	Screw Length
10mm/TE	20- 30mm	16mm TG	45-50mm
12mm/TS	20- 30mm	19mm TG	45-50mm

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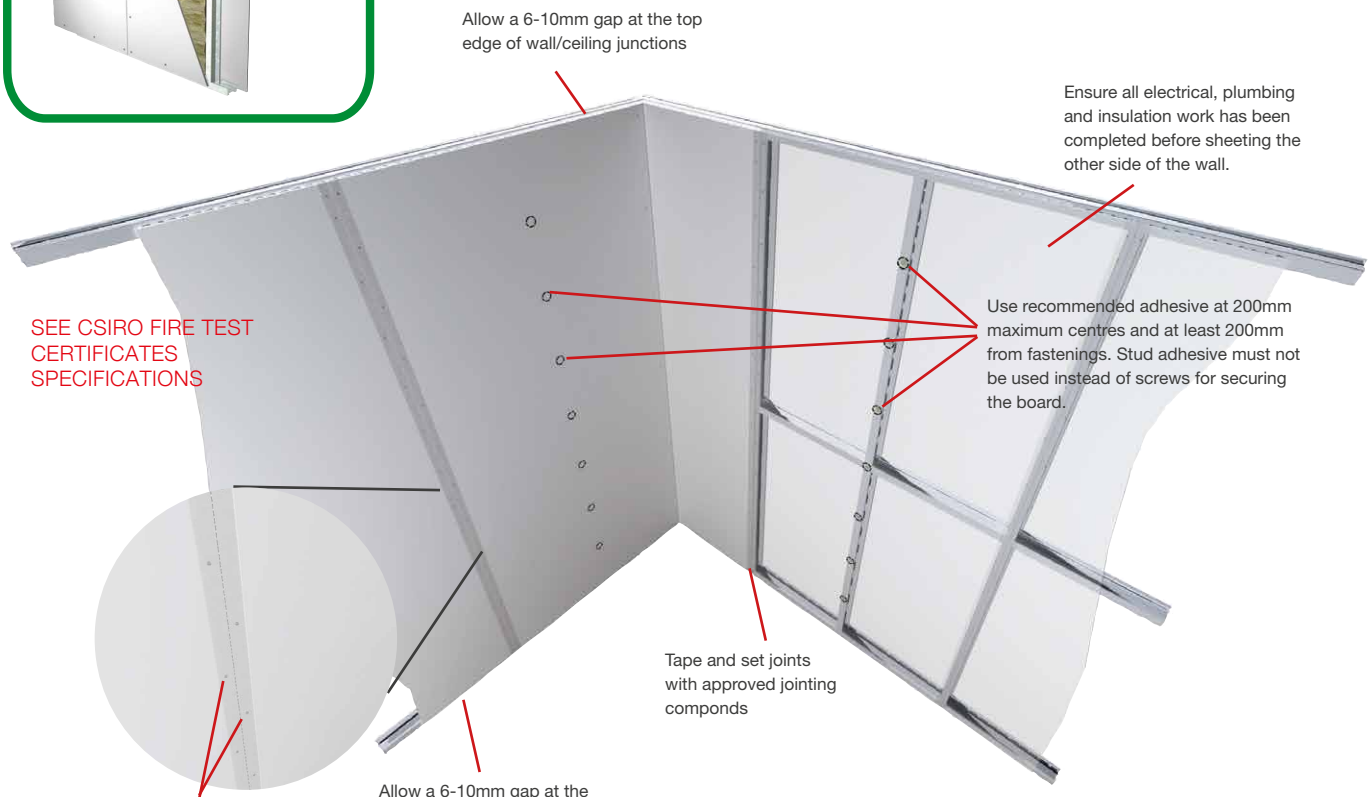
INTERNAL FIRE WALL

AS/3837 (Group 1) C10 and C12
Applicable for NATA Lab Tested
AS1530.4, AS1530.8.2
BAL 29, 40 or FZ

10mm K-Clad FireCrunch and adding a 90mm R2.5 Glasswool fire batt, you achive a fire rated wall **FRL 90/90/90 in Steel framing and FRL 60/60/60 in Timber Framing.**
(see Fire manual).

FIXING NOTES

• FireCrunch sheets can be installed horizontally or vertically, how ever vertical installation is required for Load bearing walls. ****(SEE NOTE BELOW ON FIRE 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 maximum of 200mm centres. Fasten boards at a maximum of 200mm centres to top and bottom plates and at a maximum of 300mm 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 maximum 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.
• 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 resitant sealant before tiling.
• TE 10 Reccessd edge 10mm board must be paper tape plaster set jointed before applying primer sealer Klass S1.
(Refer to https://firecrunch.com.au/recommended-products/



******IMPORTANT NOTE**
IN LOAD BEARING FIRE WALLS, BOARD MUST BET FIXED VERTICALLY NO EXCEPTIONS

Fire Crunch AUSTRALIAN CERTIFIED BUILDING SOLUTIONS

FIRECRUNCH INSTALLATION - **INTERNAL WALLS**

FLOOD PRONE AREAS

FireCrunch does not retain water and will not swell so if a room has been flooded, the FireCrunch 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 Klaas S1 valpour permeable sealer.
ADHESIVE DAUBS can be used at 150 mm min intervals.
DO NOT USE adhesives in FLOOR Prone areas.

SCREWS

Steel Frame self counter sinking Ribbed Head screws
Wood Frame 8-10 self counter sinking Ribbed Head Class 2 / 3 screws
• Fix at every stud along sheet centreline
• Butt Joints: Fix at 200mm centres

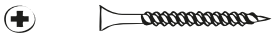
What type of fastener should I use ?

STEEL FRAMES
We recommend using self counter sinking Ribbed Head screws.

COUNTER SINK CORROSION PROOF SCREWS

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

TIMBER FRAMES
We recommend using 8-10 self counter sinking Ribbed Head screws Head Class 2 / 3 Needle point screws (depending on timber hardness). Maximum depth between surface of screw head and surface of FireCrunch should not more than 3.0mm



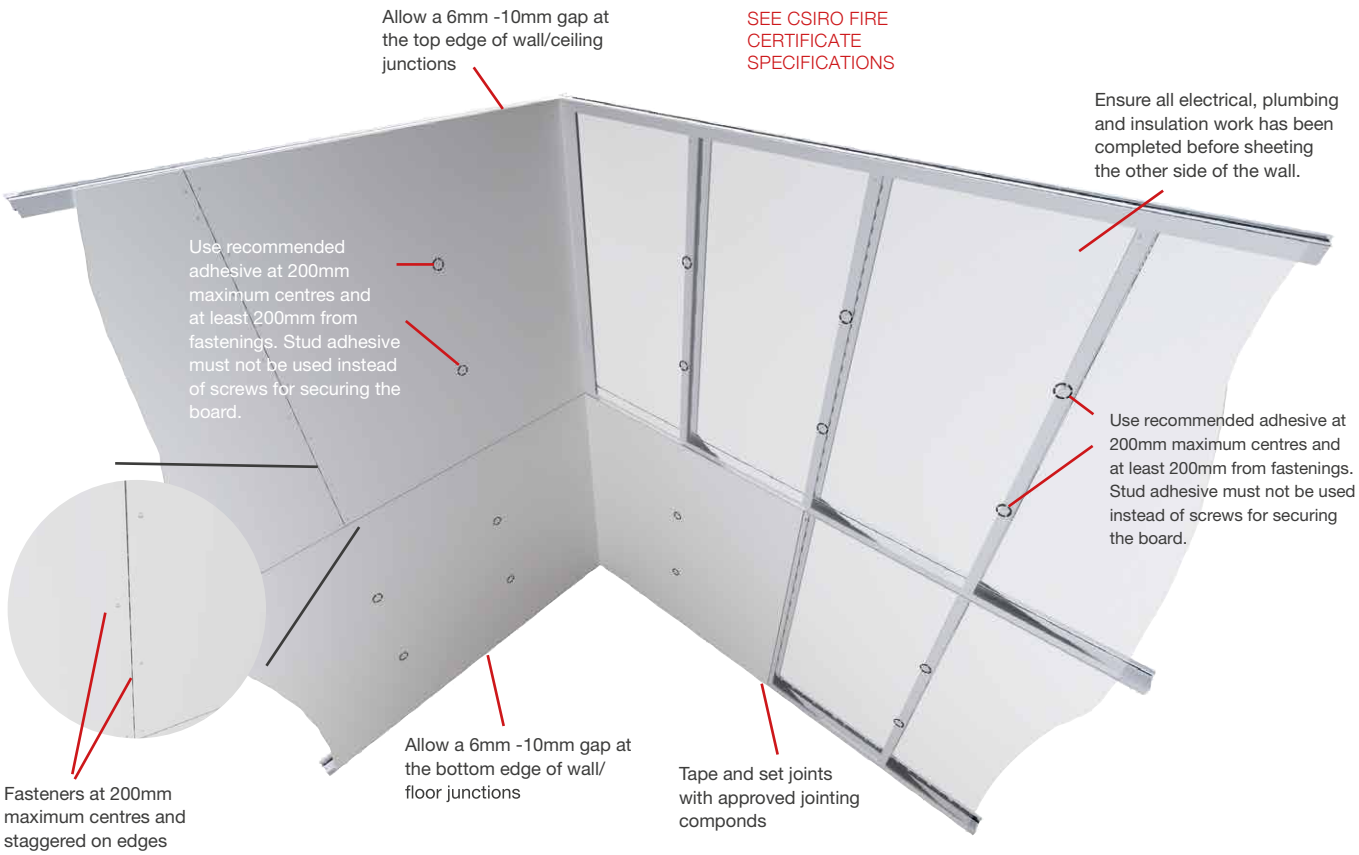
SEALER + UNDERCOAT + PAINTING OR RENDERING :

FireCrunch is a fire and finish board which delivers a minimum class 4 finish. For paint application, (INTERNAL / EXTERNAL) (WARRANTY) first ensure surface is dust free and clean, seal with :

1st step : **AquaCrunch / KLAAS Si VAPOUR PERMEABLE sealer (interior and exteriors)** ,
2nd : you must then apply
Dulux Precision MAX ADHESION undercoat, then apply
3rd STEP : **Dulux** paints or texture top coats.

AquaCrunch / KLAAS Si VP sealer primer is obtainable on order from FireCrunch Australia. A Top Class 4 /5 commercial finish is then obtained.
https://www.firecrunch.com.au/recommended-products/

DO NOT ALLOW FIRECRUNCH Boards to get WET or Hydrate over 10% BEFORE Sealing with AquaCrunch Sealant.



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