

NOTE: This is not a controlled document so may vary. The latest installation manuals can be downloaded for the FireCrunch support website. Please ensure you have the latest version before you start installation.

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 finally carbonated with a specified level of fibre mesh which provides its enhanced strength. FireCrunch has no asbestos, formaldehyde or any toxic derivatives or toxic chemicals that can cause harm to health. FireCrunch is One board with many applications.

KEY FEATURES

The fine, densely bonded, mineral fibre structure of FireCrunch ensures excellent machining and working properties using normal woodworking equipment or hand tools. In addition, the smooth face surface provides an ideal base for paint finishing with most 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.

FireCrunch is available in a range of accurately dimensioned sheet sizes and in thicknesses of 6mm, 10mm and 20mm.

AUSTRALIAN CERTIFICATION

FireCrunch is Fire Tested under CSIRO Certificates
No's: 2674 / 2707 / FCO-3165 by the CSIRO



- 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 2014: Part 3.5.3.3, Fibre Cement Planks and Weatherboard Cladding.
- BCA Volume Two 2014: Part 3.5.3.4, Fibre Cements Sheet Wall Cladding.
- BCA Volume Two 2014: Part 3.5.3.5, Eaves and Soffit Linings.
- BCA Volume Two 2014: Part 3.7.1, Fire separation for FRL, including state variations for SA. (Refer to limitation e).
- BCA Volume Two 2014: Part 3.7.4, Bushfire areas to Part 3.7.4.0 and 3.7.4.1, including state variations NSW, QLD, SA and TAS.

FIRE PROPERTIES

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

FireCrunch panels 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 - Components and structures.
- AS 1530.4-2005 - Fire-resistance test of elements of construction.
- AS/NZS 1530.1 - Combustibility test for materials.
- AS/NZS 1530.2 - Test for flammability of materials.
- AS/NZS 1530.3 - Part 3: simultaneous determination of ignitability, flame propagation, heat release and smoke release.
- AS/NZS 1530.4 - Fire-resistance test of elements of construction.
- AS/NZS 1530.8.1 - Tests on elements of construction for buildings exposed to simulated bushfire attack - Radiant heat and small flaming sources
- AS/NZS 1530.8.2 - Tests on elements of construction for buildings exposed to simulated bushfire attack - Large flaming sources

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 requirements, when used to protect timber framing, under AS/NZ 3837 materials.

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 panels, soffits, lining or decking (meets AS/NZS 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 used to produce it and makes it a virtually carbon neutral product. FireCrunch is 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 450mm centres. Must be kept under cover away from all weather conditions.

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 a replaceable filter or disposable half respirator to avoid respiratory problems and wear long sleeved shirts and trousers to prevent skin irritation. 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 just like timber.

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
6mm / 8mm	Ceilings, walls	Square, Feather
10mm	Walls (internal and external), ceilings	Square, Taper
20mm	External walls, floors, decks	Square, Tongue & Groove

INTERIOR/EXTERIOR LINING

Position fasteners a minimum of 50mm from corners and min. 15mm from edges. All facing surfaces must be finished with suitable and approved finishes. 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 frame construction in most locations: countersunk ribbed head screws spaced 200mm on centre at panel edges and intermediate framing members spaced up to 300mm on centre (depending on use).

STEEL FRAMING

General wall installation to conventional 20ga metal frame construction in most locations: Use minimum No. 8-18 x 8.5mm HD x 25mm long ribbed bugle corrosion proof screws spaced 150mm on centre at panel edges and intermediate framing members spaced up to 300mm on centre (depending on use).

JOINT TREATMENT

FireCrunch SE panels can be fastened at abutting board edges and optionally covered by PVC or metal joiners, battens or with a compatible caulk. See the FireCrunch website for alternatives.

SCREWING

All screws must be corrosion proof (stainless steel recommended for external use).

For screwing FireCrunch panels to steel framing, we recommend using Countersunk Ribbed Head screws.

For screwing FireCrunch panels to wood framing, we recommend using 8-10 Countersunk Bugle 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 2.0mm (10 and 20 mm board, flush on 6 mm board).

Recommended Screw Sizes

Board Thickness	Screw Length	Board Thickness	Screw Length
3mm	12mm	6mm / 8mm	12mm
10mm	30mm	20mm	45-50mm

INDICATIVE CONSTRUCTION DIAGRAM

As every building is different the following diagram is provided as an indicative guide to the use of FireCrunch in non-fire rated dry area situations. Architects, designers and contractors should consult FireCrunch if additional assistance is required.

What type of fastener should I use?

STEEL FRAMES

We recommend using Countersunk Ribbed Head screws.



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

**SEE RECOMMENDED PRODUCTS ON THE
FireCrunch SUPPORT SITE FOR FASTENER
PRODUCT INFORMATION www.firecrunch.com.au**

TIMBER FRAMES

We recommend using 8-10 Countersunk Bugle 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.



QUICK NOTES

SCREWS

Steel Frame Countersunk Ribbed Head screws
Wood Frame 8-10 Countersunk Bugle Head Class 2 / 3 Needle Point screws

- Fix at every second stud along sheet centreline
- Butt Joints: Fix at 200mm centres

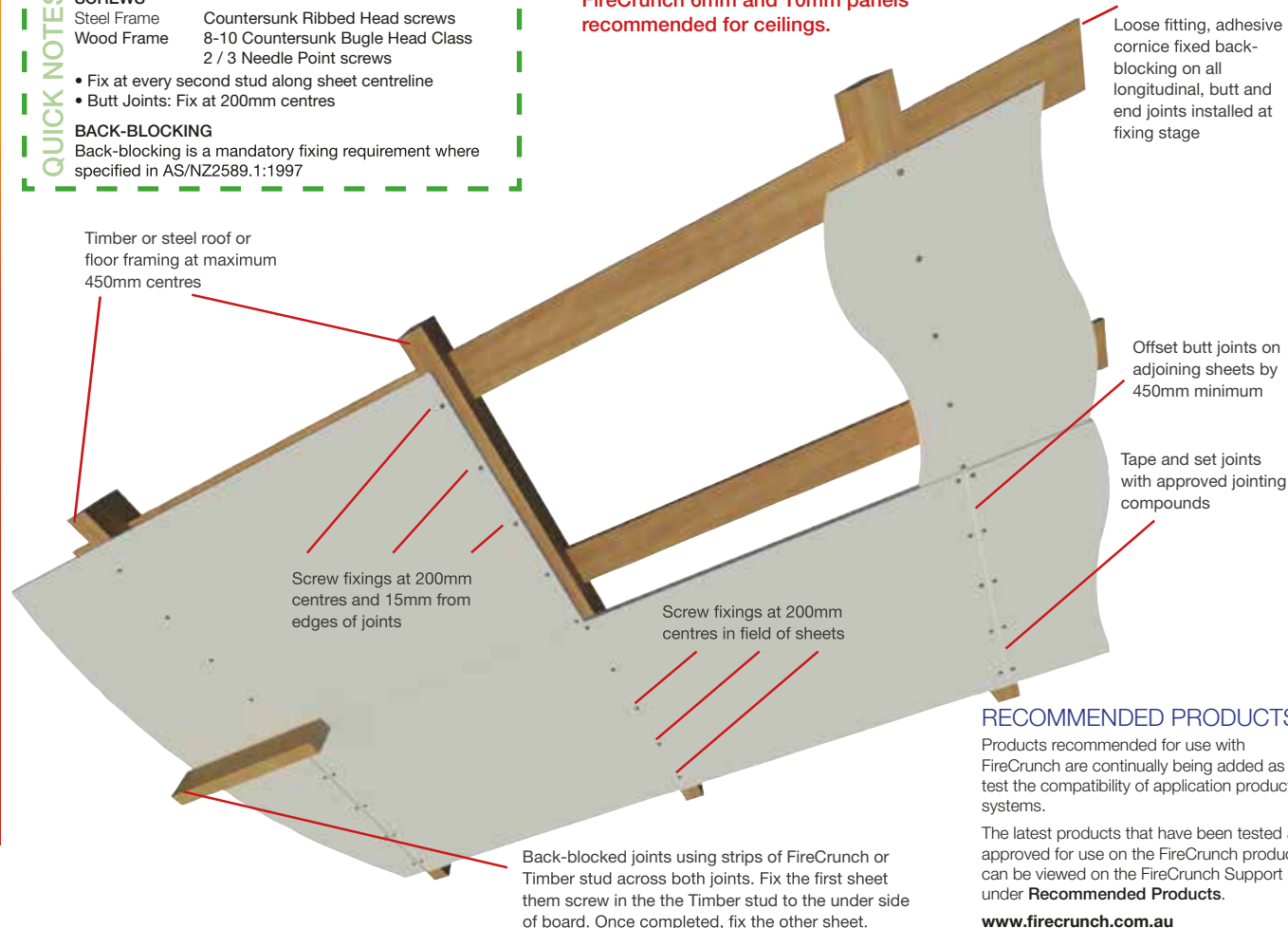
BACK-BLOCKING

Back-blocking is a mandatory fixing requirement where specified in AS/NZ2589.1:1997

FIXING NOTES

- TIMBER or STEEL framed ceilings are to be constructed strictly in accordance with the Building Code of Australia and all relevant Standards.
- FireCrunch sheets are to be fixed with the long side at right angles to the ceiling joists.
- If used, apply 25mm diameter patches of recommended adhesive at a maximum of 200mm centres and a minimum of 200mm from all fasteners. Adhesive must not be used instead of screw fasteners.
- Firmly hold the boards against the joists while fasteners are positioned and, where possible, start from the centre and work to the ends and edges.
- Fasten min. 15mm from the edge and min. 50mm from corners of ceiling at a maximum of 200mm and at a maximum of 300mm centres in the field of sheets.
- Back-blocking is a mandatory fixing requirement where specified in AS/NZ2589.1:1997 and failure to install back-blocking may lead to rectification claims for defective joints.
- Cut 200mm wide back-blocking pieces to fit loosely between joists and centrally on joints. Fix with recommended cornice adhesive and/or screws at maximum 200mm centres where butt joints are positioned between joists and at the edges of all sheets. Use 2-3mm packers to form hollows for later filling with recommended jointing material and hold for at least 24 hours with temporary battens at each joint.
- Fasteners should finish with the head just below the surface of the FireCrunch. FireCrunch is strong but care should be taken not to damage the core or face.
- Fill exposed tapered edges and butt joints with recommended paintable caulking.
- Where the ceilings are to be installed in areas where fire resistance is required, please consult the FireCrunch Fire Protection information on the FireCrunch website.

FireCrunch 6mm and 10mm panels recommended for ceilings.



RECOMMENDED PRODUCTS

Products recommended for use with FireCrunch are continually being added as we test the compatibility of application products and systems.

The latest products that have been tested and approved for use on the FireCrunch product can be viewed on the FireCrunch Support site under **Recommended Products**.

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firecrunch.com.au

