






GENERAL TECHNICAL REFERENCE INSTALLATION

-  FIRE PROOF
-  FLOOD PROOF
-  IMPACT RESISTANT
-  TERMITE PROOF
-  MOULD & BACTERIA PROOF



FireCrunch is an environmental and extensively tested modern building board used in internal and external construction and cladding. It is made from a composite of magnesium-oxide, non-organic minerals, bonders, fibre mesh composites and non metal corrosive (MgSO₄).

Eco Considerate Confirmations

FireCrunch Australasia is a 2024 member of DECLARE International via Living Future International, who have qualified FireCrunch MgSO₄ products as meeting the requirements of a "Non-Red List" range of pollutive and dangerous chemicals.

FireCrunch contains no formaldehyde, no asbestos, no "Metal Corrosive" chloride and no toxic chemicals. See SDS - Safety Data Sheet under *Manuals & Drawings* on web site. Uses only Mag Sulphate bonders (MgSO₄), no VOC's in product content. See *Certifications* on web site: Australia NATA Labs CSIRO and Sharp & Howells NATA Melbourne.

Key Features

This fine densely bonded 1.15g/cm³ "non chloride" magnesium oxide sulphate board ensures excellent machining and working properties with normal woodworking tools, saws, drills and planes, no expensive diamond cutting tools required. When cutting these sheets, use a bench saw with heavy duty extractor at rotary blade and wear suitable respiratory masks - see "Safety Data Sheet K-Product Range FireCrunch" under *Manuals & Drawings* on web site for further info. The smooth top class 4/5 with recessed edges requires no extra finish with plasterboard and provides the perfect base for MgO sealing, painting, rendering, and bagging with general-purpose products while providing BCA NATA Labs CSIRO tested fire protection.

FireCrunch K-Series Available in Standard Industry Sizes and Edges

- ★ 10mm K-Clad 2400, 2700 and 3000 all 1200mm wide SQ and recessed edge
- ★ 12mm K-Wall weatherboard timber appearance (Bushfire BAL FZ)
- ★ 16mm K- Deck 2700 x 600mm V-Groove
- ★ 19mm K-Floor and K-Roof 2700 x 600mm Tongue & Groove board

Sheets are much lighter than CFC and do not require expensive pre-drilling to fix like heavy expensive CFC, Secura floor, Cemintel, Scyon, CSR, Durafloor James Hardie etc. and up to 30% less in cost.

IMPORTANT NOTE: Unlike most MgO boards available in Australia to date, FireCrunch contains NO steel corrosive chloride. FireCrunch uses Magnesium Sulphate bonders (MgSO₄) which eliminates all steel corrosive action.

Product Applications

Australian NATA accredited CSIRO Labs fire testing to NCC/BCA. FireCrunch has a very wide range of use for residential, commercial and industrial buildings, schools, hospitals, Government and social housing, utility buildings etc. The board has major application in internal, external cladding, inter tenancy and fire separation walls in hi-rise construction and additional applications channels and internal electrical risers, air conditioning and lift shafts in multi-story and commercial buildings. Fire and finish board Class 4/5 Top Commercial.

Bushfire Tested AS1530.8.2/ AS1530.4-2014

CSIRO/NATA fire tested (NCC) bushfires (BAL FZ and over). FireCrunch is applicable in ALL BAL-rated areas, including BAL FZ Flame Zone, 50Kw/m² irradiance, meeting regulation areas, and meets the AS3959 requirements when used to protect exposed timber framing eaves joists, etc. Non-combustible under AS1530.1 and AS1530.4/2014-2029 CSIRO. Load Bearing FRL 90/90/90 55kN steel frames 1.0 BMT (just 1x 10mm K-Clad sheet per side) and FRL 60/60/60 timber framing FRL 120/120/120, 2x 10mm each side on steel frame walls (NCC).

Firewall Penetrations, Pipes, Power

FRL .../90/90 SNAP fire collars CSIRO fire test AS1530.4-2014/ NCC 2024 and AS1530.1 non-combustible materials C1.10 AND C1.12. complies with the Building Code of Australia ABCB/NCC 2022 latest update.

FireCrunch is fire-tested under CSIRO Certificates No's: 2674/2707/FCO-3165 ISO/IEC 17025

- ★ 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.

No metal corrosive chloride NATA Labs certified Sharp & Howells Melbourne 2023. See *Certifications* on web site.

Interior Applications

Fire separation walls FRL 90/90/90 and over. FCA is a fire proof and finish surface board, Class 4 to class 5 Top Commercial. Also suitable for wet area applications: Bathrooms, tile backer, shower recess, kitchens bathroom flooring substrate - once sealed correctly, suitable for any wet areas and especially humidity prone areas. FireCrunch is mould-resistant after sealing with the **recommended primer** (Warranty). It will not degrade in standing water or flooding or pooling on decking, once properly sealed with the **recommended primer** and painted with recommended undercoat and finish paints choice, suited to the application.

In Water or Flooding Submersion

After drying the sheets out for 7 days in warm weather, just clean off the surfaces and repaint but check for 10% max hydration before re-setting plaster joints (internal) and the same for external under 10% and repainting - less mess, lower cost and check your insurer for a better premium using FireCrunch products!

Exterior Applications

Meets AS3959 BAL FZ Flame Zone Regulations. Must be weather sealed with the **recommended primer** on front and any exposed sides, do not seal the back of board, it can then be painted, texture painted, tiled, rendered or veneered. for rendering see manufacturer's instructions (BCA Fire Test Certified NATA/CSIRO).

NOTE NEW INSTALLATIONS: Boards must be stored out of weather, prior to use remove any plastic wrapping which otherwise may raise humidity on receipt, prime the sheets before any external installs with K-Clad SE10 or K-Wall TS12 or K-Deck 16mm decking. Apply undercoat and finish coats same day of installation. If rained on prior to painting, use hydrometer to ensure 10% or less in standard industry painting practice.

Environmental Capabilities

During the manufacturing process, in carbonation, FireCrunch draws back 90% of the CO2 created in manufacture and makes it a virtually carbon neutral product. It also does not destroy millions of trees to make paper-lined plasterboard further reducing the environmental impact.

Cutting & Machining

FireCrunch is easy to work and machine with normal woodworking tools and equipment. Cut sheet with a fine tooth handsaw or power saw. Edges may be trimmed with a smoothing plane, power plane or light fine sandpaper. Panels with thicknesses 10mm can be deep scored with a cutting knife and snapped along the straight edge in the same way as you would with gypsum boards.

Where holes are required, clean cutter bits or twist drills are satisfactory. Woodworking shapers, spindle moulders and high speed routers can be used to shape or mold the edges of FireCrunch. Tungsten carbide tipped cutters are preferred for very long production runs.

IMPORTANT SAFETY: WHEN CUTTING SHEETS, USE A BENCH SAW WITH A SUITED VACUUM EXTRACTOR AS DUST IS DEVELOPED IN CUTTING. WEAR AN INDUSTRY-RECOMMENDED RESPIRATORY FACE MASK.

Finishing, Sealing & Protection

(see [Recommended Products](#) on web site)

Sheets used in the external application must be face and edge sealed where exposed and primed with the **recommended primer** prior to EXTERNAL installation, and immediately if in high humidity. Do NOT seal the back face of the board. FCA is an eco green "breathing product". FireCrunch products contain no metal corrosive chloride, only "Non Corrosive" magnesium sulphate (MgSO4) and are set apart from all other MgO boards in Australia. See NATA certificates on web site under [Certifications](#).

Patching

Dents and chips can be filled with a cementitious patching compound or an elastomeric filler. For countersunk screw heads use a 2-pack epoxy to avoid shrinking.

Fire Sealant - Apply to Stud Faces, Edges & Perimeters

The fire sealant choice is TREMstop PU, Bostic Fire Ban, Soudal, and Sikka range AS1530.4. See [Recommended Products](#) on web site. Available from main hardware stores in Sealers & Painting. Pre-seal all with the **recommended primer** + Undercoat + Painting or Rendering: FireCrunch is a fire and finish board which delivers a minimum class 4 finish.

Priming & Painting

Panels used in the internal and external applications must be primed first with the **recommended primer**. Do not leave it unsealed in the rain (Warranty). Check moisture level is 10% or below before priming and undercoating and painting:

1. Before applying paint (internal/external) (Warranty), ensure the surface is dust-free and clean, prime with the **recommended primer** (interiors and exteriors). Apply before external installations.
2. Then, apply a suitable water-based undercoat to match the paint manufacturer you have chosen for the top coats. When you place an order, FireCrunch supplies the **recommended primer**.

Plaster Set Joints TE10 10mm Sheets

(see *Recommended Products* on web site)

FOR WARRANTIES TO APPLY, USE ONLY THE PRO PLASTER PRODUCTS SHOWN ON WEB SITE. Paper tapes must NOT be used with FireCrunch externally, only internally. Fiba Fuse or similar taping products can be used externally and must NOT be used for Internal plaster joint setting. Carefully check manufacturer's compound instructions before use.

IMPORTANT: Do not leave a 6mm fire sealant gap between internal FireCrunch TE10 sheets. Gun fire sealant down the internal wall stud face ONLY, with 2 x 3mm beads, press boards onto fire sealant and screw fix, leaving only a 2mm sealant pressured gap, use plaster set procedures with (paper tape) and PRO PLASTER PRO BASE 40 (40 minute) BASE 1st and 2nd coats (do not use longer period compounds) then use Pro Plaster (4T) topping for feathering out.

Recommended Products Tiling

FireCrunch can be tiled on either face and is particularly useful in wet and humid areas. Use the **recommended primer** on face of board ONLY. For tiling refer to tiles adhesive manufacturer's instructions. ALWAYS leave under side of K-Clad (walls) or K-Floor unsealed before tiling. Tiling should be installed in accordance with Good Trade Practice. Additional information on tiling can be found in the publication 'Good Tiling Practice' from Branz or similar. Set over maximum 450mm joist centres on 19mm TG when tiling, not 600mm. FireCrunch must not be left out in wet or moist conditions before tiling.

Tested with Ardex Products: see <https://ardexaustralia.com/product/>.

DO NOT allow FireCrunch boards to get wet or hydrate over 10% BEFORE sealing with the **recommended primer**. Store sheets FLAT under cover on a horizontal pallet or on glut supports spaced at maximum 450 centres with both end edges supported. If the board has been exposed to rain and weather, use a hygroscopic meter to ensure it dried to 10% maximum, BEFORE sealing and painting (Warranty).

DO NOT USE STUD GLUE IN FLOOD AREA WALLS, BOARDS NEED TO BE UNSCREWED AND REMOVED TO DRY OUT TIMBER FRAMING.

Fixings

Use stainless steel or non-corrosive screws (see below) a minimum of 50mm from corners and 12mm-15mm from edge. All facing boards and any exposed edges must be sealed and finished with suitable and approved **recommended primer** after the plaster set. (see website *Recommended Products*).

Timber & Steel Framing Installation to NCC Standards

Use corrosion-proof or stainless steel self-countersink ribbed head bugle needle point screws spaced 200mm centres and 12mm to 15mm from board edges (FRL 60/60/60) single timber stud firewall.

Steel Framing Installations FRL 90/90/90

As above, with screw fasteners to conventional 20ga (min. 1.0 BMT) galvanised steel frame construction. Fixings No. 8-18 x 8.5mm HD x 25mm long, ribbed head bugle, corrosion proof screws spaced 200mm centres at panel edges min 12mm/15mm and intermediate framing members spaced up to 200mm centres stagger fixings on adjacent panels. Stainless steel or corrosion proof or galvanised screws required for use and definitely in external or wet area applications. Use corrosion proof screws elsewhere.

Fire Joint Treatment (External Walls)

FireCrunch SE10 K-Clad (square edge) panels fastened at abutting board edges must have a backing nog or stud to back the vertical set joints, tool down fire sealant 2 to 3mm below the surface line, if exposed joint line required, otherwise fill to edge surface the 6mm wide gap between external set boards then prime with the **recommended primer** and paint or texture coat surface.

DO NOT USE PVC joint cover strips in BAL fire areas or fire walls. Use metal joiners, steel min 0.75 BMT and fire seal joints with recommended fire sealants AS1530.4. See *Recommended Products* on website for alternative weather and fire sealers.

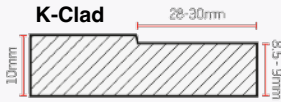
SQUARE EDGE (SE)

Standard sizes panels with SQ edges all sides.
Available thickness: 10mm



RECESSED EDGE TE10 FOR PLASTER SET INTERIOR WALLS & CEILINGS

Standard sizes panels with 30mm width and 1.5mm depth recess on long edges.
Available thickness: 10mm



TONGUE & GROOVE (TG)

Specialty flooring & decking panels. High density 1.15g/cm³.
Available thickness: 19mm.
One size: 2700 x 600mm

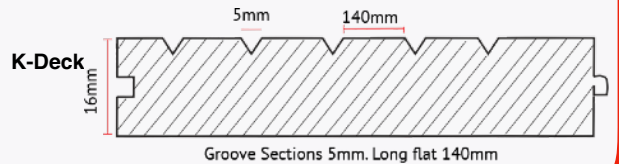


GROOVED K-WALL WEATHERBOARD 12mm SHIPLAP (TS12)



GROOVED DECKING BOARD 16mm TONGUE & GROOVE (TGDK)

2700 x 600mm x 16mm TGDK



Product Name	Size width x length mm	Thickness	Edge	Weight	Pattern
K-Floor	600 x 2700	19mm	Tongue & Groove	36kg	Flat/Smooth
K-Deck	600 x 2700	16mm	Tongue & Groove	32kg	Groove
K-Wall	1000 x 2700	12mm	Ship Lap	36kg	Groove
K-Clad SE10 Exterior	1200 x 2400	10mm	SQ Square	28kg	Flat/Smooth
K-Clad SE10 Exterior	1200 x 2700	10mm	SQ Square	32kg	Flat/Smooth
K-Clad SE10 Exterior	1200 x 3000	10mm	SQ Square	36kg	Flat/Smooth
K-Clad TE10 Interior	1200 x 2400	10mm	Recessed	28kg	Flat/Smooth
K-Clad TE10 Interior	1200 x 2700	10mm	Recessed	32kg	Flat/Smooth
K-Clad TE10 Interior	1200 x 3000	10mm	Recessed	36kg	Flat/Smooth

Characteristic	Unit	Unit Description
Density	1.15 g/cm ³	Grams per cubic centimetre
Tensile Strength	>5.5 MPa	Mega Pascal units
Compressive Strength	~20 MPa	Mega Pascal units
Striking Resistant Strength	±23 N/mm ²	Newton per square millimetre
Dimensional Change	0.5%	Percentage of water absorption
Modulus of Elasticity	~6045 N/mm ²	Newton per square millimetre
Flexibility	~20.1 N/mm ²	Newton per square millimetre
Thermal Conductivity	~0.152 W/mK	High Aust. Insulation Rating
Asbestos	0%	Absent - NATA Labs tested
Formaldehyde	0%	Absent - Manufacturer tested
Magnesium Chloride	0%	Absent - NATA Labs tested
Freeze Thawing Test	No change after 25 cycles of freeze thawing	

Acoustic Properties

FireCrunch boards significantly improve acoustic performance. Its construction actively dampens noise and reduces the sound waves entering, exiting acoustic and fire separation walls.

FireCrunch MgO boards have been tested in zero insulation conditions on a 90mm steel frame (1.0 BMT) in single and double stud in discontinuous format with fire and acoustics batts up to min R2.5 glass wool batt density. This provides up to Rw62 plus ctr net=Rw52.

Higher density min R2.5 batts will provide a corresponding increase in Rw/ctr net/acoustic batt min R2.5. Check acoustics tests by Kilargo under Certifications.

For steel framing, we recommended using self countersunk ribbed head bugle screws. Stainless steel screws should be used in external or wet applications



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

For screwing FireCrunch panels to timber framing, we recommend stainless steel or corrosion proof screws plated 8-10 self 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 be more than 3mm.



All fasteners must be corrosion proof. Quality stainless steel or galvanised fasteners to be used for external and wet areas.

Recommended screw sizes:

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



DO NOT NAIL FIRECRUNCH

INSTALLATION MANUALS DO NOT SPECIFY THE USE OF NAILS IN ANY SYSTEM APPLICATION, USING NAILS INSTEAD OF SCREW FASTENERS WILL VOID THE FIRECRUNCH WARRANTY

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 **recommended primer**.
- STEP 3 After the **recommended 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**.

The **Recommended Warranty Primer** is available at major hardware stores (Bunnings, Mitre10)

