

# Technical Reference Installation **GENERAL**

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 (MgSO<sub>4</sub>).

**FireCrunch contains no formaldehyde, no asbestos, NO "Metal Corrosive" CHLORIDE and no toxic chemicals. See ( SDS - Safety Data Sheet) Uses only Mag Sulphate bonders (MgSO<sub>4</sub>) No VOC's. AUST/NATA**

## Key Features

This fine densely bonded 1.12g/cm<sup>3</sup> "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. The smooth TOP class 4/5 with recessed edges requires no extra finish plaster board and provides the perfect base for MgO sealing, painting, rendering, bagging with general purpose products, while providing BCA NATA labs CSIRO tested fire protection.

## FCA AVAILABLE IN STANDARD INDUSTRY SIZES AND EDGES.

2400, 2700 and 3000 all 1200mm wide SQ and Recessed edge 10mm, 19mm Tongue and Groove board flooring 2700x600mm and external 16mm decking for easy fit, lighter weight and no expensive pre drilling, like heavy, expensive CFC, INEX Secura floor, Cemintel, Scyon, CSR, JAMES HARDY etc and up to 30% less in \$ cost.

## IMPORTANT NOTE

**Unlike most MgO board available in Australia to date FireCrunch contains NO steel corrosive chloride. FireCrunch uses Mag Sulphate bonders ( MgSO<sub>4</sub>) which eliminates all corrosive action.**

## PRODUCT APPLICATIONS

**Australian NATA accredited CSIRO LABS fire testing to BCA.**

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 MAJOR application in internal, external cladding, intertenancy 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 FINSH board..

## INTERNAL APPLICATIONS: **Fire separation walls FRL90/90/90 and over .**

FCA is a fire proof and finish surface board, Class 4/5 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 recommended Klass AquaCrunch primer sealer it will not degrade in standing water or FLOODING OR POOLING ON DECKING Once properly sealed with **KLAAS/AquaCrunch Si PRIMER SEALER**. In repaints just clean surfaces, reset plaster joints and repaint, less mess, low cost and check your insurer for a better premium using FCA products !

## EXTERIOR APPLICATIONS:

(Meets AS/ 3959 BAL FZ Flame Zone Regulations). Must be weather sealed with **AquaCrunch primer sealer 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 mfg instructions (BCA Fire Test Certified NATA/ CSIRO

### NOTE:

board must be stored out of weather, prior to use remove any plastic wrapping which otherwise may raise humidity.

## CSIRO/ NATA FIRE TESTED ( NCC) BUSH FIRES ( BAL FZ AND OVER ).

FireCrunch is applicable in ALL BAL RATED AREAS INCLUDING BAL FZ FLAME ZONE 50Kw/m<sup>2</sup> IRRADIANCE, meeting regulation areas and meets the AS 3959 requirements, when used to protect exposed timber framing eaves joists etc.

Non Combustible under AS/ 1530.1 Load Bearing FRL 90 minutes steel frames (Just 1 x 10mm sheet per side)

Load Bearing FRL 90/90/90 (10mm on steel frame) Load Bearing and FRL 60/60/60 timber framing

FRL-/120/120, 2 x 10mm each side on Steel frame walls ( NCC ).

For Fire Wall Penetrations to FRL .../90/90 SNAP fire collars.

**CSIRO Fire Test AS /1530.4 and AS/1530.1 NON COMBUSTIBLE MATERIALS C1.10 AND C1.12.**

## COMPLIES WITH THE BUILDING CODE OF AUSTRALIA

**FireCrunch is Fire Tested under CSIRO Certificates No's: 2674 / 2707 / FCO-3165 ISO /IEC 17025**

**BCA Volume One : C1.8 Lightweight Construction, C1.10 Group 1 Fire hazard properties and C1.12**

**NON-COMBUSTIBLE AS1530.0 and RISF and flashover under AS5367 (2025)**

AS /3837 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 for SA. (Refer to limitation e).

**BCA Volume Two 2019:** Part 3.7.1, Bushfire areas to Part 3.7.4.0 and 3.7.4.1, including state variations NSW, QLD, SA and TAS.

TECHNICAL  
REFERENCE  
INSTALLATION

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NOTE: FCA ref, is FireCrunch Australia

CALL TODAY **1300 933 102**

sales@firecrunch.com.au



firecrunch.com.au

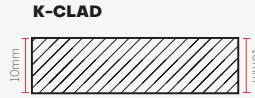


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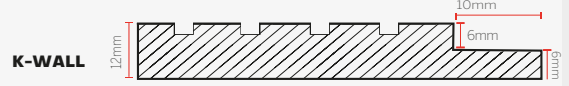
## PRODUCT DETAIL

### SQUARE EDGE (SE)

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

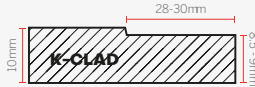


### GROOVED WEATHER BOARD 12mm SHIP LAP (TS)



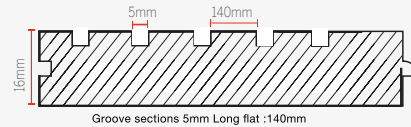
### RECESSED EDGE TE10 FOR PLASTER SET INTERIORS WALLS AND CEILINGS

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



### K-DECK

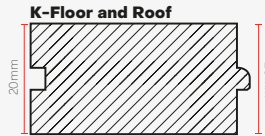
16mm Tongue and Groove (TGDK) Grooved decking board  
Order code FCA-TG16DK-2700 X 600  
Size: 2700 x 600 16mm TGDK



Grooved DECKING

### TONGUE AND GROOVE (TG)

Specialty Flooring & Decking panels. High Density 1.15g/cm<sup>3</sup>, available thickness 19mm ONE Size: 2700 x600



Drawings not to scale

## STANDARD STOCK SIZES

PRODUCT NAME OF BOARD	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

## PRODUCT PROPERTIES (STANDARD BOARD)

Characteristic	Unit	Unit Description
Density	1.15 (g/cm <sup>3</sup> )	Grams per cubic centimete
Tensile Strength	>5.5 (MPa)	Mega pascal units
Compressive Strength	~20 (MPa)	Mega pascal units
Striking Resistant Strength	±23 (N/mm <sup>2</sup> )	Newton per square millimete
Dimensional Change	0.5 (%)	Percentage of water absorption
Modulus of Elasticity	~6045 (N/mm <sup>2</sup> )	Newton per square millimete
Flexibility	~20.1 (N/mm <sup>2</sup> )	Newton per square millimete
Thermal Conductivity	~0.152 (W/mK)	High Aust. Insulation Rating
Asbestos	0 %	Absent - NATA LAB TESTED
Formaldehyde	0 %	Absent - MFG TESTED
Magnesium Chloride	0%	Absent - NATA LAB TESTED
Freeze Thawing Test	No change after 25 cycles of feeze Thawing	

## ACCOUSTIC PROPERTIES

FireCrunch Panels significantly **improves acoustic performance**. Its construction actively dampens noise and reduces the sound waves entering, exiting acoustic and Fire separation walls.

FireCrunch MgO sheets have been tested in zero insulation conditions on a 90mm steel frame using (1.15mm BMT) in single and double stud in discontinuous format with fire and acoustics batts up to min R2.5 Glasswool batt density. This provides up to Rw 62 plus ctr net=Rw 52.

**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 web site**  
**firecrunch.com.au**  
**firecrunch.com.au/certification**

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## Environmental Properties

During the manufacturing process, in carbonation, FireCrunch draws back 90% of the Co2 created in manufacture and makes it a virtually carbon neutral product DOES NOT DESTROY MILLIONS OF TREES to make paper lined plaster board.

## 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.

## Finishing , Sealing & Protection

(see ) <https://firecrunch.com.au/recommended-products/>

Panels used in external application must be faced sealed with **KLAAS / AquaCrunch Si** vapour permeable primer sealer, prior to, or right after installation, and immediately if in high humidity.

### Do not seal back face of board FCA is an ECO Green "breathing product"

FCA products contain no metal corrosive Chloride only "Non Corrosive" magnesium sulphate (MgSO4) and set apart from all other MgO boards in Australia. NATA certificates WEB site certifications. <https://firecrunch.com.au/certifications/>

## Patching

Dents and chips can be filled with cementitious patching compound or an elastomeric filler.

Primer Sealer ( Warranty)

Panels used in internal and external application must be primed first **KLAAS / AquaCrunch Si** vapour permeable primer sealer, prior to, or right after installation, do not leave unsealed in the rain ( warranty) if so check moisture level 10% or below before priming .

## FIRE SEALANT---APPLIED TO STUD FACES , EDGES AND PERIMETERS

The fire sealant choice is TREMstop PU, Bostic Fireban, Soudal ,and Sikka range to AS/1530.4 see web site SEE <https://firecrunch.com.au/recommended-products/> AVAILABLE FROM MAIN HARDWARE STORES SEALERS AND PAINTING

## PRE SEAL ALL

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

Klass 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/>

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 must be used externally and must NOT be used for Internal plaster joints setting. Carefully check mfg compound instructions, before use

**IMPORTANT:** Do not leave a 6 mm fire sealant gap between internal FCA boards.

**GUN FIRE SEALANT DOWN THE INTERNAL WALL STUD FACE ONLY, with 3 x 3mm beads**, press boards onto sealant and screw fix leaving only a 1 mm sealant pressured gap, use plaster set FIRECRUNCH 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 Proplaster (4T) Topping for feathering out. See detail on website : Recommended Products

## Tiling

FireCrunch can be tiled on either face and is particularly useful in wet and humid areas. USE ONLY **KLAAS / AquaCrunch Si** vapour permeable primer sealer on face of board ONLY. FOR TILING REFER TO TILES ADHESIVE MFG INSTRUCTIONS, ALWAYS leave under side of K-Clad (FCA) 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 FireCrunch must not be left out in wet or moist conditions before TILING TESTED with **ARDEX PRODUCTS use <https://ardexaustralia.com/product/>**.

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

Store FLAT under cover on a horizontal pallet or on glut supports spaced at maximum 450 centres with both end edges supported. IF BOARD HAS BEEN EXPOSED TO RAIN AND WEATHER USE HYDROSCOPIC METER TO ENSURE DRIED TO 10% BEFORE SEALING AND PAINTING.



FIRE TESTED BY CSIRO / BCA

firecrunch.com.au



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**Fixing & Installation** Interior/Exterior Lining  
**( DO NOT USE STUD GLUE IN FIRE RATED WALLS )**

Position recommended fixings a minimum of 50mm from corners and 12mm -15mm from edge .  
 All facing boards and any exposed edges must be SEALED finished with suitable and approved primer sealer, after plaster set. ( web site recommended products).

**Timber Framing**

Installation to conventional wood frame construction use corrosion proof 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 fire wall.

**Steel Framing**

Installation as above with metal fasteners to conventional 20ga (min. 1.15 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 GALVANISED SCREWS required for use in external or wet area applications. Use corrosion proof screws elsewhere.

**Fire Joint Treatment ( External walls )**

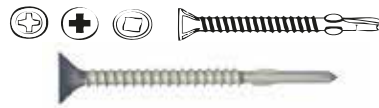
FireCrunch SE10 K-CLAD (SQ edge) panels fastened at abutting board edges must have ,a backing nog or stud to back the joints, tool down fire sealant 2 to 3mm below edge of board and paint or texture coat surface (class 4/5 finish) **DO NOT USE PVC STRIPS IN BAL FIRE AREAS OR FIRE WALLS** use metal joiners, steel min 0.75BMT and Fire seal joints with recommended fire sealants . Type AS/1530.4. PU See the FireCrunch website firecrunch.com.au for alternative weather and fire sealers see recommended products . see technical resources /recommended products.

**Nailing**

**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**

Screwing

For steel framing, we recommend using self Countersink 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 Countersink 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.



All fasteners must be corrosion proof .Quality stainless steel or Galvansed 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

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



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