

Australian FIRE TESTED by the CSIRO
MAGNESIUM-OXIDE BUILDING & LINING BOARD



FOR FIRE AREAS



BAL 12.5 to 40 and FZ (Flame Zone)
FRL 120/120/120 Steel Frame
FRL60/60/60 Timber Frame

FOR WET AREAS



Does not warp or swell
Does not degrade in moist areas
Available in water resistant, HD T&G

FOR THE ENVIRONMENT



Very low carbon footprint.
100% recyclable.

FOR HEALTH SAFE AREAS



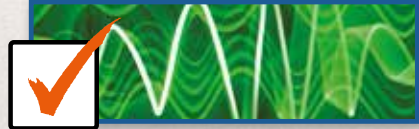
Totally non-toxic, chemical free
Helps protect from mould and bacteria

FOR TERMITE PROTECTION



Termite proof.
Of no interest to white ants and pests.

FOR NOISY AREAS



Acoustic Decibel Rating over 50Db.
Sound insulation to Rw 61 plus Ctr = Net Rw 52.

FOR MULTIPLE APPLICATIONS



Walls, Floors, Ceilings, Soffits,
Decks, Fences, Tile Backing,
Bathrooms, Kitchens...

YOU NAME IT!





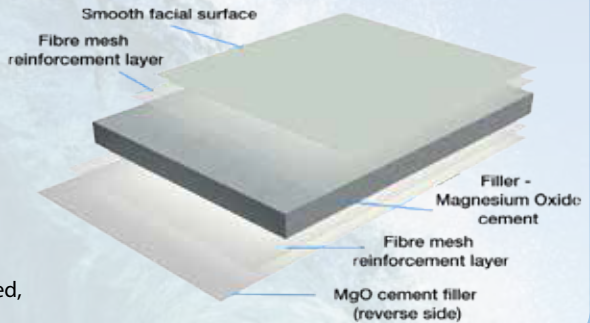
Magnesium-Oxide. From the ocean to you...

Magnesium oxide (MgO) comes from the steel manufacturing process and a naturally abundant supply... Our oceans. MgO is a recyclable salt based mineral that is totally fire proof and when mixed with specialised resins and compounds. FireCrunch MgO panels have the qualities of timber but with no combustibility to 800°C and no flame out at 1000°C making it the ideal choice for building in fire rated areas.

Appearance of FireCrunch

FireCrunch panels have one smooth side and one textured and are generally off white in colour or grey for the high-density board.

The top and bottom edges of the board are square with the long edges being square, tapered, chamfered or tongue & groove.



Physical Properties (ALL FireCrunch IS NON COMBUSTIBLE)

CHARACTERISTIC	UNIT	UNIT DESCRIPTION
Density	(Kg/ m3) 1150 HD, 1250 HDD AND 1350 HDDD	KG/m3
Tensile strength	>5.5 (MPa)	Mega pascal units
Compressive Strength	~20 (MPa)	Mega pascal units
Striking resistant strength	>6 (KJ/m ²)	Kilojoules per square metre
Dimensional Change	0.5 (%)	Percentage of water absorption
Span Test 450mm Centres	4.1 (kN)	Kilo Newton
Flexibility	~20.1 (N/mm ²)	Newton per square millimetre
Thermal conductivity	~1.52 (W/mK)	High Aust. Insulation Rating
Asbestos / Formaldehyde	0 %	Absent - Not Measurable
Freeze Thawing Test	No change after 25 cycles of freeze Thawing	

Architects & Specifiers

Introducing MOACS (FireCrunch Online Architectural Compliance System).
Architectural & Fire Engineer BCA FRL variable database.
FRL, insulation and acoustic levels for FireCrunch - 250 BCA variables.

For more information go to www.FireCrunch.net.au



Overview

FireCrunch is a modern, extensively tested modern building board used in construction. It is made from a mixture of magnesium oxide (MgO), non organic minerals, bonders and fibre mesh composites. FireCrunch is completely free of toxins, including formaldehyde, silica, asbestos, heavy metals, and organic solvents.

It's highly resistant to fire CSIRO TESTED, doesn't retain water, termite proof, strong and increases the R value in any panel application (meets all 8 Australian climatic zones).

FireCrunch has extensive applications in construction for residential and commercial properties. It is also of particular interest to those renovating or repairing homes where either plasterboard gypsum style linings or other kinds of high maintenance products have been used.

FireCrunch (General Application) Specifications

FireCrunch is 8 to 10 times stronger than plasterboard reducing loss and breakage. It is also less expensive and lighter in weight than compressed fibre panels. Due to its material properties, FireCrunch does not break down or warp in water, therefore less replacement requirement after flooding... simply clean, sand and repaint.

Additionally, FireCrunch is resistant to mould and mildew, blocks noise with a high acoustic value of $R_w + C_{tr}$ 61 for the 10mm board, is imperviousness to termites and FireCrunch is virtually fire proof!

This is why we say **"ModakBoard - One Building Board, Multiple Applications"**.

Application Overview

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

Wet area applications: bathrooms, shower recess, kitchen - suitable for any wet areas or humidity prone areas. FireCrunch will not degrade in water or flood conditions it remains inert and can simply be dried, re plaster set and repainted. Must be sealed before or at installation.

EXTERIOR APPLICATIONS - Weatherboarding, lining or decking (meets AS/NZS 3959 BAL Regulation - Fire Zone areas). Must be sealed. Can be painted, papered, tiled, rendered or veneered.

Tool Requirements

No special tools are required to use FireCrunch. It can be sawn, drilled, (**DO NOT NAIL THIS PRODUCT**) screwed and planed, just like timber. Once in position FireCrunch will have an exceptional life span exceeding that of all homes constructed to date using conventional plasterboard, paper lined plaster, or timber lining methods.





Product Range

Square Edge Fire Board

For a all-in-one board, the FireCrunch 10mm Square Edge (SE) board is perfect. Easy to use with a top class finish on one side.



Tapered (Recessed) Edge Fire Board

The FireCrunch Tapered Edge (TE) board is designed for easy taping and clean joints. The board is recessed on the long sides by a depth of 0.5mm and a width of 30mm.



Chamfered Edge External Wall Board

FireCrunch Chamfered Edge (CE) board is an innovative external wall board, with a 45° V chamfer cut down 5mm on the 10mm board long sides. Does not require any surface trowelling to join and eliminates stud joint cracking. Supplied as a 900mm nominal width (894mm).



Feather Edge Lightweight Board

The Feather Edge board similar to the tapered edge board for use except it is produced in 6mm only. It is designed for use in internal applications where joint taping is required. special order only



Tongue & Groove HD Floor Board

The Tongue & Groove High Density board a water resistant, stronger and denser board grooved down one long side with a matching tongue down the other. This board comes in a grey finish distinguishing it from other product and is perfect for decks and external applications. More information available online.



Board Size Dimensions

Thickness (mm)	Board Size (mm)	Approx. Weight (kg)	Edge	Use
3	2400 x 1200	9	Square	SIP Skins / Custom projects
6	2400 x 1200	17	Square/Feather	Internal Walls / Ceilings
6	2700 x 1200	19	Square/Feather	Internal Walls / Ceilings
6	3000 x 1200	21	Square/Feather	Internal Walls / Ceilings
10	2400 x 1200	28	Square / Taper	Fire Rated Walls / Ceilings / Soffits
10	2700 x 1200	32	Square / Taper	Fire Rated Walls / Ceilings / Soffits
10	3000 x 1200	35	Square / Taper	Fire Rated Walls / Ceilings / Soffits
10	3000 x 900	27	Chamfer	Fire Rated Easy joint external walls
20	2700 x 600	32	Square / T&G	Fire Rated Walls / Floors / Fences
20	2700 x 900	48	Square / T&G	Fire Rated Walls / Floors / Fences
20	2700 x 600	32	T&G HD	Fire Rated Floors / Decks / Fences
20	2700 x 900	48	T&G HD	Fire Rated Floors / Decks / Fences

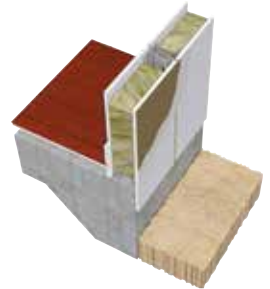


Fire Protection

FireCrunch Fire Separation Wall Systems

The simplest fire wall is the single stud, double panel fire wall system. With just 10mm of FireCrunch on each side of a single stud and suitable insulation, FireCrunch achieves a FRL 90/90/90 on steel frames and FRL 60/60/60 on timber frames.

The acoustic rating for this wall is R_w61 making it the perfect solution for most BCA residential fire wall situations.



FireCrunch Double Stud Fire Common Wall (Party Wall) System

The FireCrunch shafterliner alternative. With just 10mm thick FireCrunch each side of a double stud and suitable insulation, FireCrunch eliminates the need for an additional central shaftliner panel. This system achieves a FRL 90/90/90 on steel frames and FRL 60/60/60 on timber frames. (Timber frames require minimum 75kg Rock wool batts)

The acoustic rating for this wall is 62 plus ctr net $R_w 52$ An ideal solution for most BCA residential party (common) wall projects.



FireCrunch Two Board Masonry Fire Wall Alternative

Eliminate expensive masonry Fire Walls in high rise buildings.

The FireCrunch 2 board system provides FRL 120/120/120 to FRL 240/240/240 using 2 x 10mm boards each side with specified medium to high density rock wool batts (80 to 120gsm) on prefabricated cold rolled steel frame. The system also achieves an acoustic rating to $R_w 70$. (Deemed to Satisfy solution BCA/ NCC)





Environmental

The manufacturing of FireCrunch produces 90% less Co2 pollutants compared to cement based products.

Strength

FireCrunch is strong. It will last a lot longer than standard building boards therefore replacement and maintenance do not become an issue. The less you have to replace, the less damage to the environment.



Fire

FireCrunch - for 100% Fire Resistant floors, ceilings, walls, decking and external linings. Tested and approved for building in BAL FZ. FRL 30/30/30 to 90/90/90 tested CSIRO DTS SOLUTIONS TO FRL 240/240/240 ASK US CALL 1300 933 102



Flood

FireCrunch does not degrade in non-permanent water. It remains inert and can be unscrewed from timber frame to enable the timber to dry out before being re-screwed to the forming. The product simply requires a clean up and repaint and is re installed with normal power tools or screwdrivers. No messy plaster board degrade and no damage. HD T&G Board is designed water resistant.



Termites

One of the biggest issues for Australian homes is Termites. FireCrunch is made from an uniquely formulated, non-toxic fibre composite mix so is impervious to termites and insects.



Carbon Neutral

Cement board and plasterboard manufacturing use kiln temperatures in excess of 1300°C. FireCrunch is produced at temperatures around 650°C therefore producing 50% less CO₂ and 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.



Tree Friendly

FireCrunch has a Green environmental policy and has been determined to reduce CO₂ output in manufacture. FireCrunch uses minimal wood in the manufacturing process, leaving the trees to draw back carbon dioxide from the atmosphere in natural form.











Earth Friendly

Due to the makeup of the board, FireCrunch will last for periods much longer than standard building boards, therefore requires less repair. Even where the board has been damaged, it can be recut and used again, unlike plaster board.



FireCrunch is 100% recyclable.

How is FireCrunch different?

-  FireCrunch will not burn and has been tested to **1200°C** with no combustion or flame out.
-  FireCrunch does not hold water and so superheated steam will not “blow out” the product as it may do with standard building bricks in fire conditions.
-  FireCrunch is totally fire resistant. It will not burn in a fire storm. FireCrunch is applicable in BAL 12.5 to 40 and FZ flame zone regulation areas when used to protect exposed timber framing eaves joists etc. Tested by the CSIRO to worst case scenario fire storm conditions. Meets AS/NZS 1530.8.1 & 8.2, AS/NZS 3959 and AS/NZS 3837 in non combustible and non flammable material.
(NOTE: AS/3837 replaces the old AS 1530/3 BCA standard).
tested Aug /Sept 2015 to AS/NZS 1530.4/2005 BY CSIRO
-  FireCrunch insulation properties help protect internal furnishing from internal combustion and flash burning from high external temperatures.
-  FireCrunch will not ignite from ember attacks. Bushfire ember attack is the largest single national contributor to home loss.
-  FireCrunch is 8 to 10 times stronger than normal plaster board products and insulates from intense heat and cold.
-  FireCrunch will not degrade or break down in water and resists mould and mildew so is ideal for flood prone areas.
-  FireCrunch is of no interest to insect pests and termites.

General features

- Fireproof to extremely high temperatures (1200°C).
- Meets BAL 12.5 to 40 and FZ to maximum irradiance 50kW/m² - consult the rural fire authorities in your area to confirm the local Asset Protection Zone (APZ) requirements.
- Non Combustible.
- All weather product (interior/exterior when sealed).
- Resistant to flooding and prolonged water emersion.
- Resistant to mould and mildew.
- Totally resistant to termites and insects.
- Low thermal conductivity ~1.92 (W/mk).
- High Australian insulation Batt combination R values.
- Acoustic Rating R_w +C_{tr} 61 / 10mm.
- Strike resistant, strong and durable.
- Non polluting, non toxic.
- Prevents bacterial growth.
- Green product - very low CO₂ emission in production making FireCrunch virtually carbon neutral.
- Can be cut, drilled, sawn or planed like timber.
- No special trades tools required.
- Can be textured, rendered, painted, tiled etc.
- 100% recyclable material.

FireCrunch meets the structural integrity requirements of the Australian Building Codes Board (A BCB) when the board is screwed to the steel framing as used in all Modak homes. FireCrunch provides extensive protection and additional integrity to timber forming when clad with FireCrunch in fire and flood conditions.



FireCrunch FIRE TESTED to BCA by the CSIRO

Complies with the Building Code of Australia:

- 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.
- 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.
- BCA Volume Two 2014: Part 3.8.6, Sound Insulation, including state and territory for NT.



FireCrunch - Group 1 Fire Rating has been FIRE TESTED by the CSIRO

The FireCrunch building lining product :FireCrunch FIRE TESTED to BCA by the CSIRO to the Certificate level standards of AS/NZS 3837 (BCA) being the highest fire tested (Group 1) product.

PLUS AS/NZS1530.4/20015 FRL 30 THRU 90 LOAD BEARING AND TO FRL 120/120/120 LOAD BEARING. (DTS-NCC contact FireCrunch for further information).

Approved for use in

Bushfire Attack Levels (BAL) 12.5 to 40 and FZ AS/NZS 1530.8.2



For more information please contact us

Tel: 1300 933 102

Email: sales@firecrunch.com.au

web: firecrunch.com.au

