

FEBRUARY 2015



STRATUM™ ERA
CLADDING SYSTEM



BGC | Fibre Cement

AUSTRALIAN OWNED & MANUFACTURED
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INTRODUCING INNOVA™

BGC'S STUNNING RANGE OF FACADE, LINING AND FLOORING PRODUCTS, INNOVA™ WILL MOVE YOU TO REASSESS YOUR CONCEPT OF EXCELLENCE IN FACADES AND FLOORING SYSTEMS. DURABLE AND DYNAMIC, FRESH AND CONTEMPORARY, INNOVA™ IS ALREADY TURNING INDUSTRY HEADS. NOW LET THE INNOVA™ RANGE OF CLADDING AND FLOORING PRODUCTS BREATHE NEW LIFE INTO YOUR CREATIVITY AND PROJECT SPECIFICATION.



A VIBRANT, INNOVATIVE ALTERNATIVE TO TRADITIONAL WEATHERBOARDS, BGC STRATUM™ ERA IS A NEW ADDITION TO THE POPULAR STRATUM™ RANGE. STRATUM™ ERA COMPLIMENTS THE OTHER 3 PRODUCTS IN THE STRATUM™ RANGE.

STRATUM™ ERA IS 295mm WIDE PLANK DESIGNED TO FIX FLAT AGAINST THE STUD WALL. 2 HORIZONTAL FEATURES, 1 AT THE TOP AND 1 IN THE CENTRE GIVE A UNIQUE LOOK TO STRATUM™ ERA THAT IS TRADITIONAL YET CONTEMPORARY WEATHERBOARD.

STRATUM™ ERA CLADDING SYSTEM

- / EASY SHIPLAP JOINING
- / SELF ALIGNING
- / PRIMED, READY FOR PAINTING
- / QUICK, SIMPLE INSTALLATION:
MANUAL NAILING, GUN NAILING
OR SCREW FIXING



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PRODUCT DESCRIPTION

Stratum™ Era features a shiplap horizontal joining system making it quick and simple to achieve a classic yet contemporary look.

Stratum™ Era can be used for exterior cladding on low to medium rise buildings or for a different twist, can be used to create a stunning interior feature wall.

Stratum™ Era is not subject to timber rot, decay, cracking, twisting or white ant damage and will not support combustion. The result is a safer, more durable cladding that requires minimum maintenance.

ADVANTAGES

- / Shiplap joining system makes Stratum™ Era planks quick and simple to install
- / Quick and easy to cut, handle and install
- / Primed, ready for painting
- / Durable and low maintenance

ENERGY EFFICIENCY CONSIDERATIONS

Energy efficiency requirements have been introduced into the Building Code of Australia (BCA) for both commercial and residential buildings. Thermal heat transfer into and out of the building envelope will effect the running cost of the building and careful consideration of thermal heat transfer needs to be addressed by the architects, engineers and building designers. Thermal bridging through steel framing will diminish the total R-Value; thermal conductance, of the wall. Thermal breaks are required for steel framed buildings and should be installed between the stud sections and the Stratum™ Era planks. Thermal break tapes should have a minimum R-Value of 0.2.

PRODUCT INFORMATION

Stratum™ Era is manufactured from Portland cement, finely ground silica, cellulose fibres and water. Planks are cured in a high-pressure steam autoclave to create a durable, dimensionally stable product.

Stratum™ Era is manufactured to the Australian / New Zealand Standard AS/NZS 2908.2-2000 Cellulose-Cement Products, Part 2: Flat sheets and Stratum™ Era is classified as Type A-Category 2.

FIRE RESISTANCE

BGC Fibre Cement products have been tested in accordance to Australian Standard AS1530.3.

These tests deemed the following Early Fire Hazard Indices:

- / Ignitability Index 0
- / Spread of Flame Index 0
- / Heat Evolved Index 0
- / Smoke Developed Index 0-1

PLANK TOLERANCES

- / Width +0/-1mm
- / Length +0/-2mm
- / Thickness +10%/-0%
- / Diagonals difference (max) 2mm
- / Edge straightness deviation (max) 1mm

PLANK SIZES AND WEIGHT-TABLE 1

THICKNESS mm	WEIGHT l/m	WIDTH mm	LENGTH mm
10	4.1 (17.22kg per plank)	295	4200

Weights are based on Equilibrium Moisture Content.



STRATUM™ ERA

DURABILITY

Stratum™ Era's physical properties make it a very durable product.

- / Stratum™ Era is immune to permanent water damage in both short and long-term exposure.
- / Stratum™ Era will not rot or burn and is unaffected by termites, air, steam, salt and sunlight.
- / Stratum™ Era is not adversely affected over a temperature range of 0°C to 95°C.

Vapour permeable sarking must be installed under the timber or steel batten in accordance with the AS/NZS 4200.2 – 'Pliable building membranes and underlays – Installation' and the sarking manufacturers' guidelines. The sarking should have the following properties

- / Vapour barrier – low or medium
- / Water barrier – high

Vapour permeable sarking is used to prevent moisture ingress by acting as a drainage plane whilst enabling water vapour build up from inside the frame to escape.

THERMAL CONDUCTIVITY

Stratum™ Era planks have relatively low thermal conductivity. At Equilibrium Moisture content the approximate thermal conductivity of Stratum™ is; - 0.25 W/m°C.

WEATHER RESISTANCE/FREEZE THAW

Stratum™ Era conforms to the Building Code of Australia (BCA) requirements for external wall applications.

Stratum™ Era that is subject to freeze/thaw conditions must be painted. Stratum™ should not be used in situations where it will be in direct contact with snow or ice for prolonged periods.

CUTTING AND DRILLING

Stratum™ Era may be cut to size on site. If using power tools for cutting, drilling or sanding they must be fitted with appropriate dust collection devices or alternatively an approved (P1 or P2) dust mask and safety glasses shall be worn. It is recommended that work always be carried out in a well ventilated location.

The most suitable cutting methods are:

- / **DURABLADE**
180mm Diameter.
This unique cutting blade is ideal for cutting Fibre Cement. Can be fitted to a 185mm circular saw, ie Makita or similar. Please ensure safe working practices when using.



- / **NOTCHING**
Notches can be made by cutting the two sides of the notch. Score along the back edge then snap upwards to remove the notch.

- / **DRILLING**
Use normal high-speed masonry drill bits. Do not use the drill's hammer function for small round holes, the use of a hole-saw is recommended.

For small rectangular or circular penetrations, drill a series of small holes around the perimeter of the cut out. Tap out the waste piece from the sheet face while supporting the underside of the opening to avoid damage. Clean rough edges with a rasp.

Large rectangular openings are formed by deeply scoring the perimeter of the opening. Next, form a hole in the centre of the opening then saw cut from the hole to the corners of the opening. Snap out the four triangular segments. Clean rough edges with a rasp. (see method above).

HANDLING AND STORAGE

Stratum™ Era must be stacked flat, up off the ground and supported on equally spaced (max 400mm) level gluts. Care should be taken to avoid damage to the ends, edges and surfaces.

Planks must be kept dry. When stored outdoors it must be protected from the weather. Planks must be dry prior to fixing, jointing or finishing.

COASTAL AREAS

The durability of galvanised nails and screws used for exterior cladding in coastal or similar corrosive environments can be as low as 10 years.

For this reason BGC recommend the use of stainless steel fasteners within 1km of the coast or other large expanses of salt water.

ACCESSORIES AVAILABLE FROM BGC - TABLE 2

INTERNAL ALUMINIUM CORNER FOR STRATUM™ ERA	3000mm x 12mm profile	BGC Product Code INTCNR12	
EXTERNAL ALUMINIUM CORNER FOR STRATUM™ ERA	3000mm x 12mm profile	BGC Product Code EXTCNR12	
EPDM FOAM GASKET STRIP/ THERMAL BREAK TAPE	25m	BGC Product Code 845	
SEALANT	Sikaflex FC11 OR SIMILAR	BGC Product Code 485	

FASTENERS

STRATUM™ ERA TO TIMBER FRAME

2.8 x 40mm Fibre Cement Nail



2.8 x 50mm Fibre Cement Nail - Used for fixing over existing cladding. Not suitable for coastal areas.



STRATUM™ ERA TO STEEL FRAME

Fibre Zip M5 - 18 x 30mm



STRATUM™ ERA PLANK COVERAGE - TABLE 3

NO. OF PLANKS	STRATUM™ ERA	
	PLANK SIZE 4200 x 295 x 10mm	
	EFFECTIVE COVER PER PLANK 4200 x 278mm OR 1.167m ²	
	PLANK OVERLAP 17MM	
1	295	
2	573	
3	851	
4	1129	
5	1407	
6	1685	
7	1963	
8	2241	
9	2519	
10	2797	
11	3075	
12	3353	
13	3631	
14	3909	
15	4187	
16	4465	
17	4743	
18	5021	
19	5299	
20	5577	

Table 3 is provided to assist in calculating the number of planks required to cover a given wall height.

For triangular areas such as Gable ends, halve the quantities derived for a rectangular wall then add 10% to cover off cuts.

FASTENER SPACING

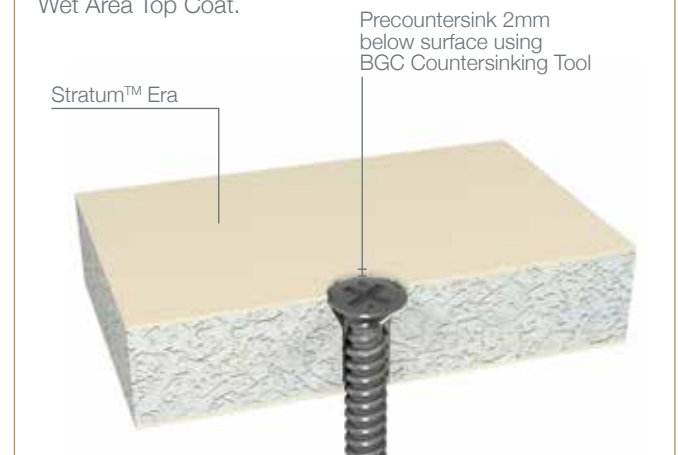
Fix the first weatherboard at an external corner and ensure the board is flush with the corner moulding. Rest the board on a datum line and fasten the bottom edge to each stud. Fasten the centre and top edge at each stud; ensuring fixings do not interfere with the overlap of the next plank above.

Fasteners must be a minimum of 12mm from plank edge and 20mm from the plank end.

Fasteners must be pre drilled where they are closer than 50mm from a plank end.

PRE COUNTERSINK

When using screws to fasten Stratum™ Era, pre countersinking is suggested so that the fastener is 2mm under the plank surface for filling with epoxy filler and then finished with BGC Exterior and Wet Area Top Coat.



CONSTRUCTION DETAILS

FRAMING

Stratum™ Era is designed to be installed horizontally to both timber and lightweight steel frames.

Ensure that the frame is square and work from a central datum line. The frame must be straight and true to provide a flush face to receive the panels.

BGC suggest a maximum tolerance of 3mm-4mm in any 3000mm length of frame.

Stratum™ Era will not straighten warped or distorted frames and any warping may still be visible after Stratum™ Era planks are applied. Warped framing will require remedial action.

TIMBER FRAMING

Use of a timber frame must be in accordance with AS1684 – Residential timber-framed construction and the framing manufacturers' specifications.

Use only seasoned timber. Do not use unseasoned timber as it is prone to shrinkage and can cause planks and frames to move.

"Timber used for house construction must have the level of durability appropriate for the relevant climate and expected service life conditions including exposure to insect attacks or to moisture which could cause decay" – Reference AS 1684.2

LIGHT WEIGHT STEEL FRAMING

Use of steel frame must be in accordance with AS3623 – Domestic metal framing and the framing manufacturers' specifications.

Framing members must have a Base Metal Thickness (BMT) between 0.55 to 1.6mm. The steel framing must have the appropriate level of durability required to prevent corrosion.

MAXIMUM STUD - TABLE 4

WIND CLASS as per AS4055:2012	TIMBER FRAME		STEEL FRAME	
	STUD SPACING WITHIN 1200MM OF CORNERS (mm)	STUD SPACING ELSEWHERE (mm)	STUD SPACING WITHIN 1200MM OF CORNERS (mm)	STUD SPACING ELSEWHERE (mm)
N1	600	600	600	600
N2	600	600	450	600
N3	400	450	300	450
N4	300	450	300	300
N5	n/a	n/a	n/a	n/a
N6	n/a	n/a	n/a	n/a
C1	400	450	450	450
C2	300	450	300	300
C3	n/a	n/a	n/a	n/a
C4	n/a	n/a	n/a	n/a

INSTALLATION DETAILS

FIGURE 1
SLAB DETAIL

Fastener*

Stud*

Vapour Permeable Sarking*

Stratum™ Era

Slab*



FIGURE 2
NAIL FIXING-TIMBER FRAME

Stud*

Vapour Permeable Sarking*

TIMBER FRAME / HAND NAILING

Use 40mm minimum class 3 fibre cement nails.

TIMBER FRAME / GUN NAILING

Use a minimum class 3 40mm long coil nail or 50mm Deckfast type D head 2.5mm face head.

Fastener*

Stratum™ Era



*Components not supplied by BGC

INSTALLATION DETAILS

FIGURE 3
SCREW FIXING - STEEL FRAME

STEEL FRAME / SCREW FIXING
Use minimum class 3 32mm screws.

Frame*

EPDM Foam Gasket / Thermal Break Tape

Vapour Permeable Sarking*

Fastener*

N4/C2 Wind Zones require an additional
face fixed screw 50mm from bottom of plank.

Stratum™ Era

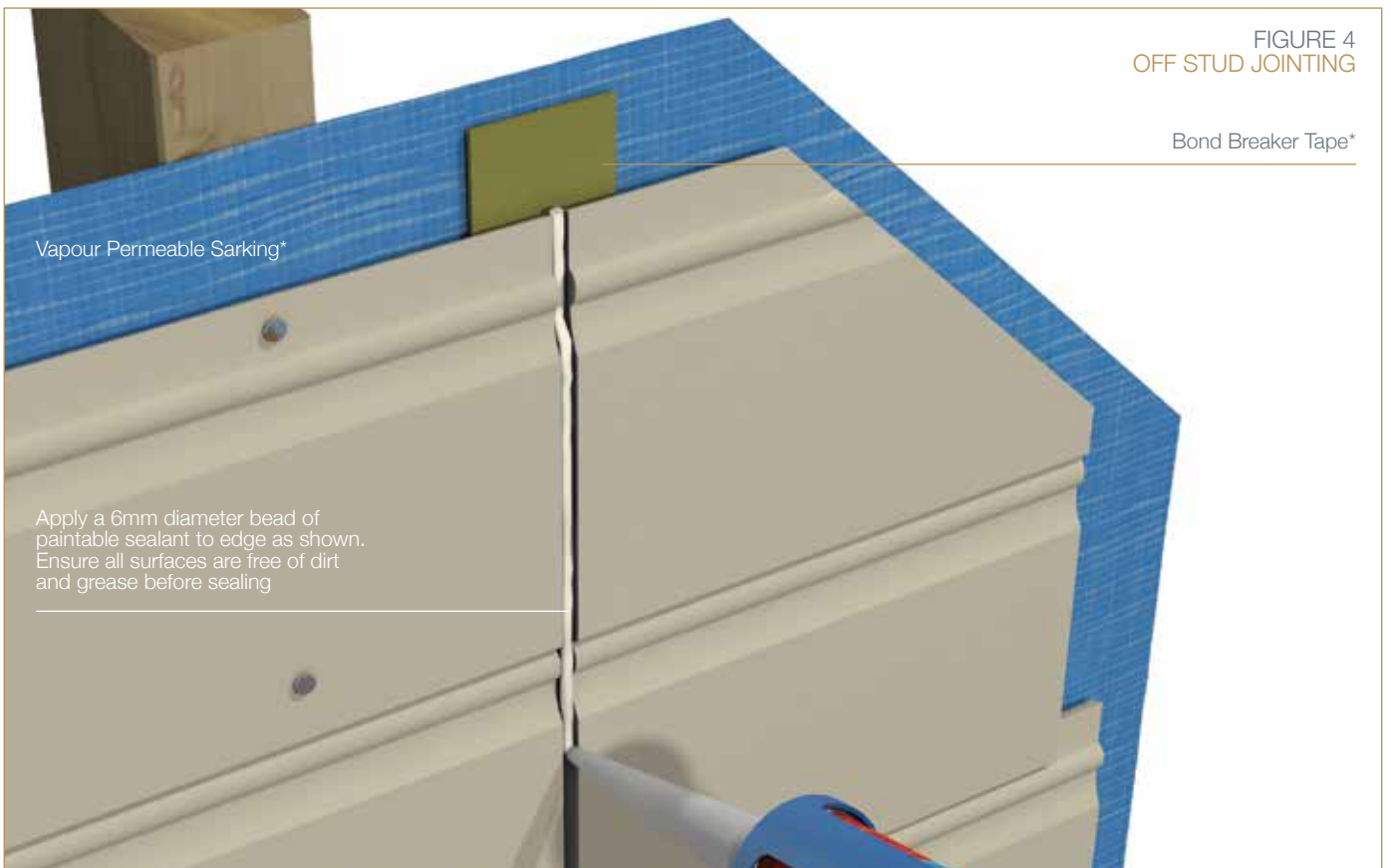


FIGURE 4
OFF STUD JOINTING

Bond Breaker Tape*

Vapour Permeable Sarking*

Apply a 6mm diameter bead of
paintable sealant to edge as shown.
Ensure all surfaces are free of dirt
and grease before sealing



*Components not supplied by BGC

INSTALLATION DETAILS

FIGURE 5
ON STUD JOINTING

Bond Breaker Tape*

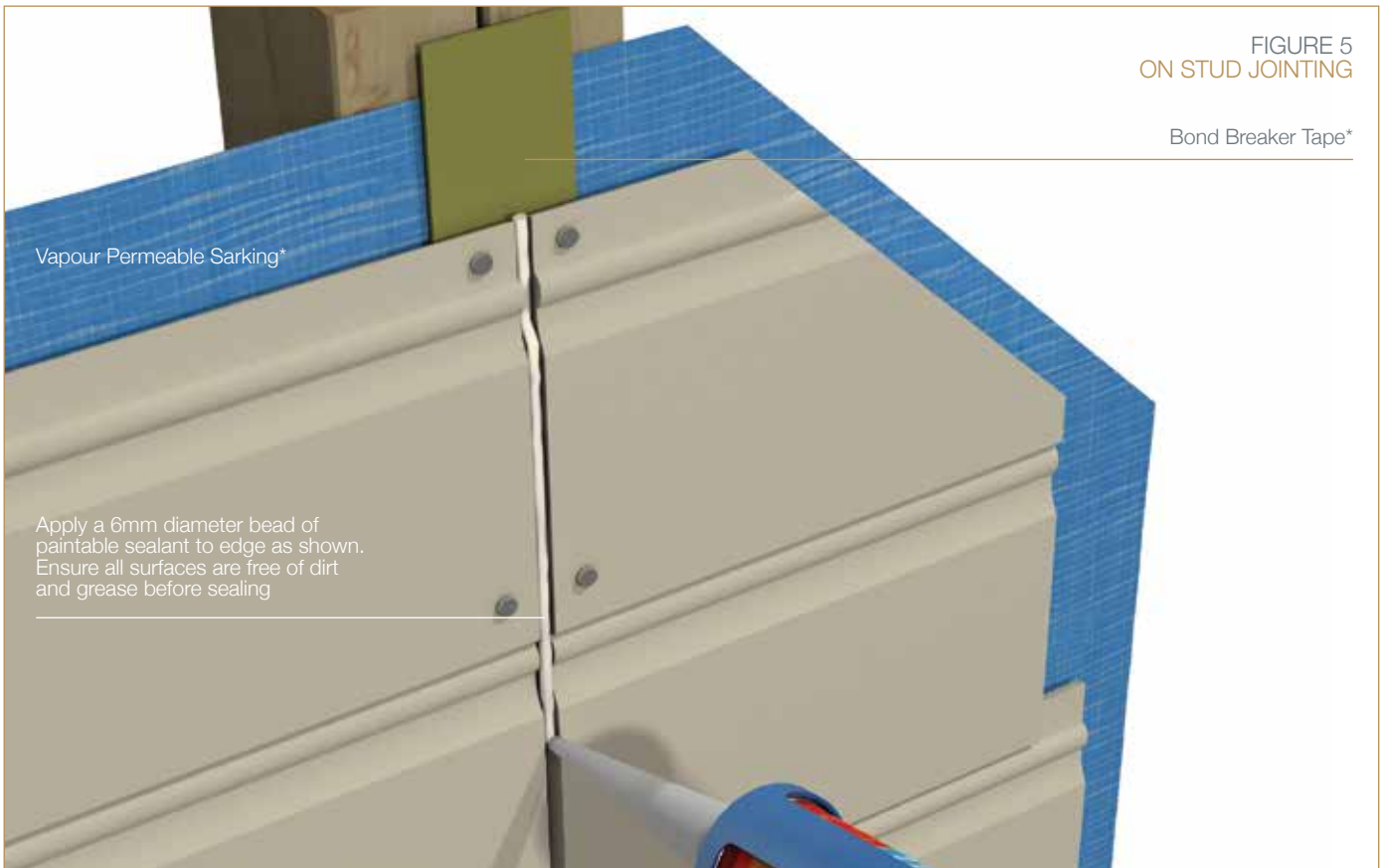


FIGURE 6
EXTERNAL CORNER / MITRE

Vapour Permeable Sarking*
continuous around corner

Flashing*

Apply continuous bead of sealant to corner flashing

Cut the end of the plank to a 45° angle. Prime ends and join with sealant. Push tightly together and wipe excess.

Install boards and nail to corner studs min 20mm back from end of board

20mm

*Components not supplied by BGC

INSTALLATION DETAILS

FIGURE 7
EXTERNAL CORNER / ALUMINIUM

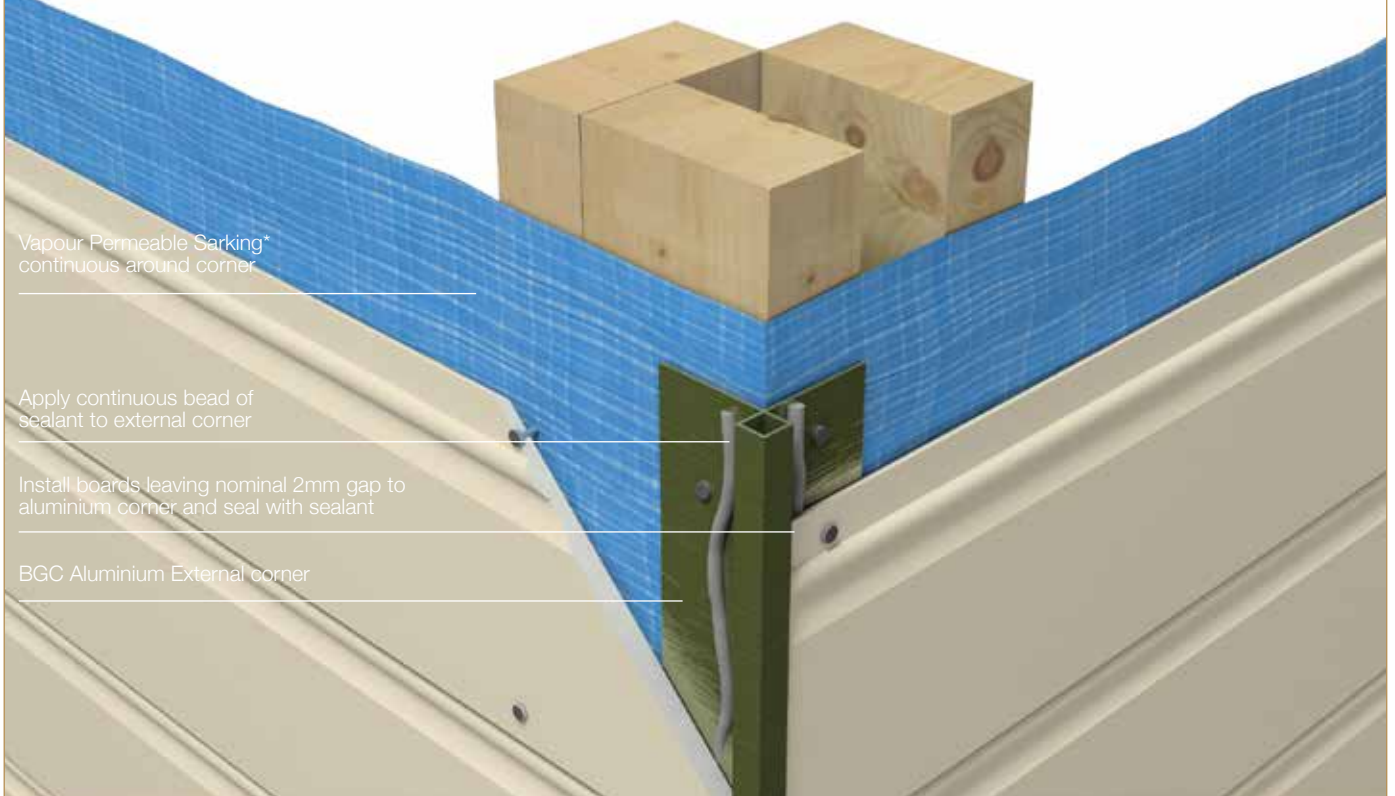
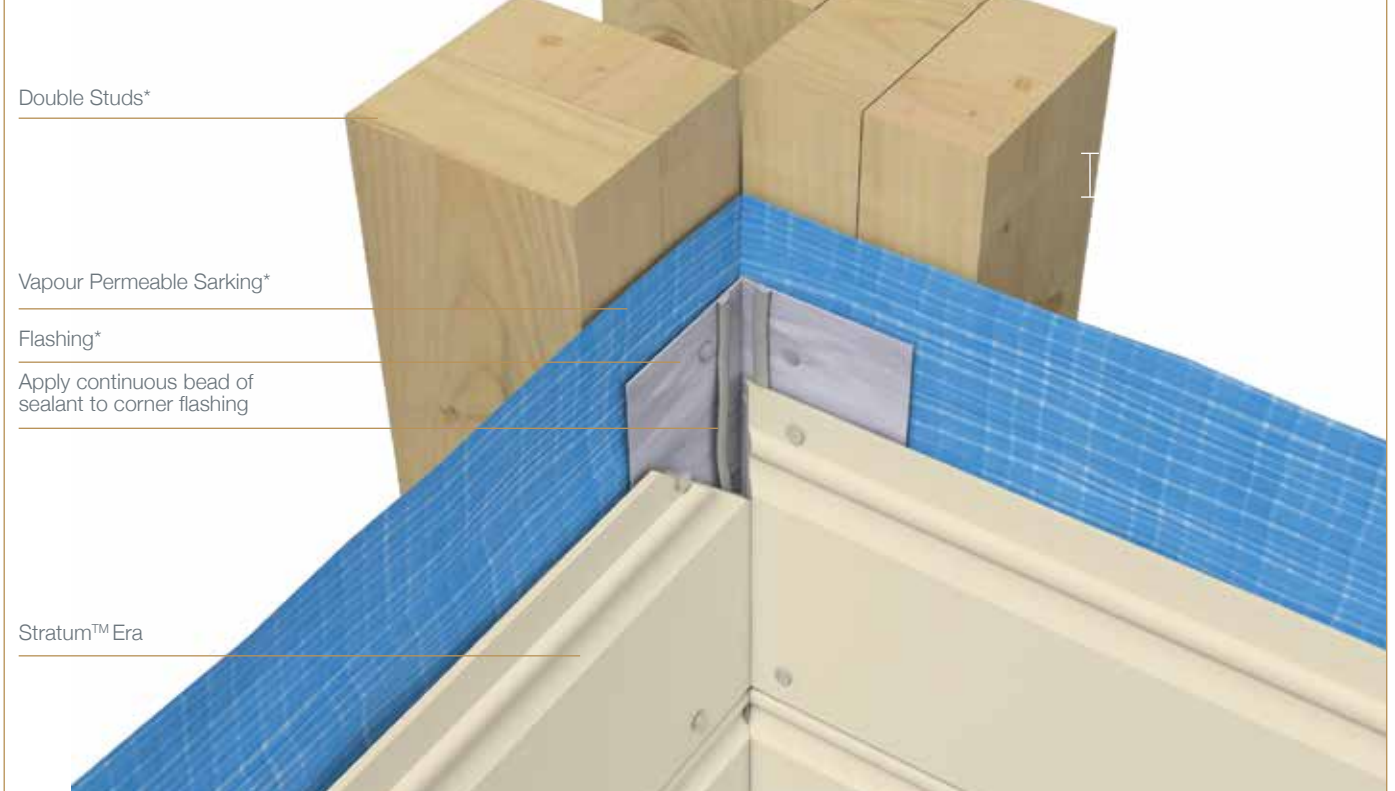


FIGURE 8
INTERNAL CORNER / MITRE



*Components not supplied by BGC

INSTALLATION DETAILS

FIGURE 9
INTERNAL CORNER / ALUMINIUM

Double Studs*

Vapour Permeable Sarking*

BGC Aluminium Internal Corner

Apply continuous bead of sealant to aluminium corner

Install boards leaving nominal 2mm gap to aluminium corner

Stratum™ Era

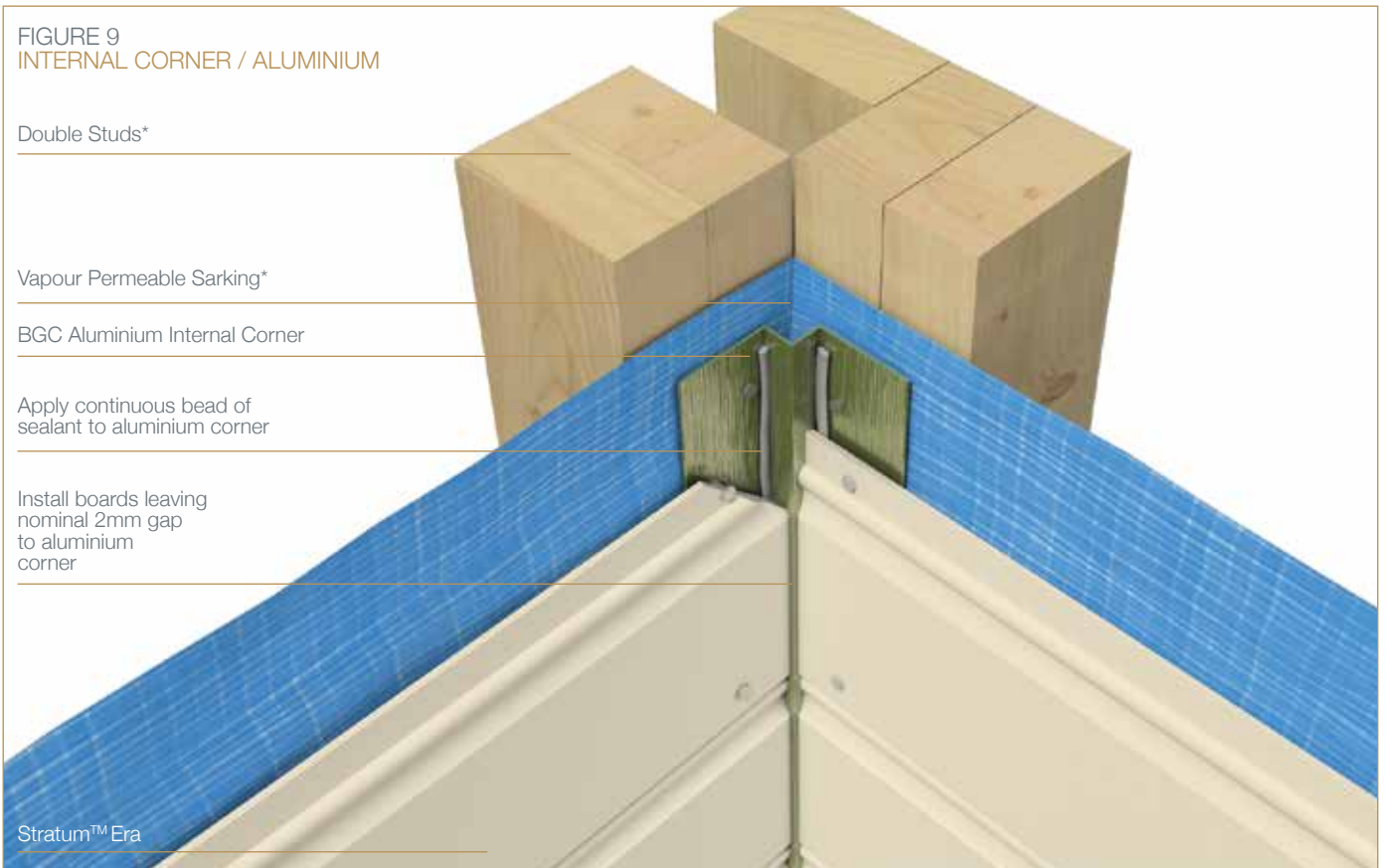
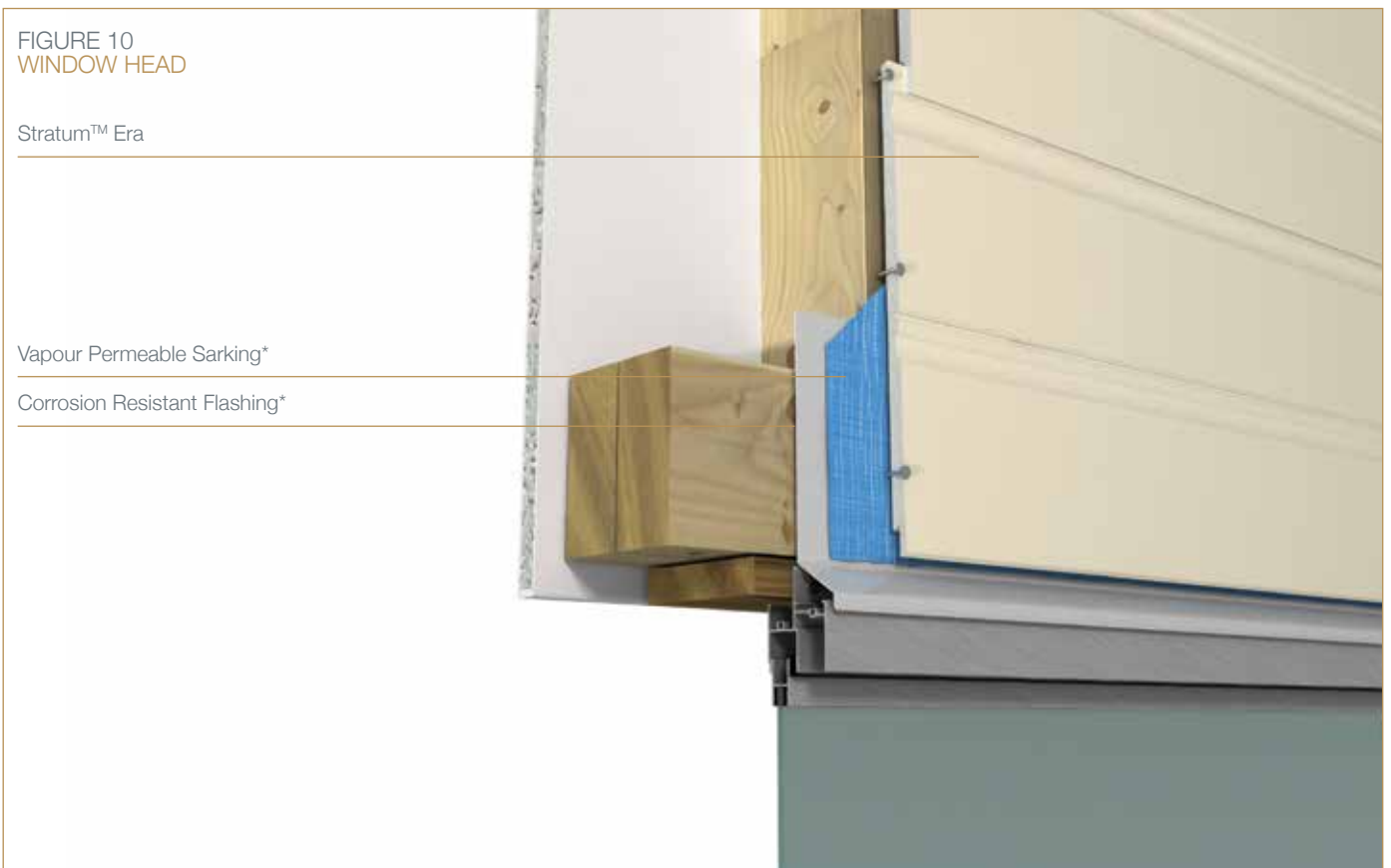


FIGURE 10
WINDOW HEAD

Stratum™ Era

Vapour Permeable Sarking*

Corrosion Resistant Flashing*



*Components not supplied by BGC

INSTALLATION DETAILS

FIGURE 11
WINDOW SILL

Sealant

Window Flashing*

Flexible Sub-Sill Flashing*

Vapour Permeable Sarking*

Stratum™ Era



FIGURE 12
WINDOW JAMB

Double Studs

Vapour Permeable Sarking*

Window Flashing*

Continuous bead of sealant

Stratum™ Era



*Components not supplied by BGC

PAINTING

It is recommended that Stratum™ Era is painted according to the paint manufacturer's instructions within three months following delivery to site with a minimum of two coats of quality exterior paint. Apply chosen paint finish to the manufacturer's recommendations.

Should Stratum™ Era be exposed to the elements for a period beyond the initial three months to achieve an optimum finish an additional priming coat is recommended prior to the top finishing coats being applied.

Ensure that the Stratum™ Era planks are dry and clean prior to applying a quality exterior paint system.

MAINTENANCE

Stratum™ Era when used in accordance with this literature requires no direct maintenance.

To guard against water penetrating the structure and damaging the framework, annual inspections of the cladding system should be carried out. Check flashing, sealant joints and paint work. Flashing and sealants must continue to perform their design function.

Damaged planks should be replaced as originally installed. Paintwork should be maintained.

INSULATION

Stratum™ Era planks will require insulation to be installed in some regions that have thermal loss regulations.

Insulation should be installed in accordance with the manufacturer's instructions. Insulation batt's must fit snugly between framing members to minimise heat loss

FREEZE THAW

Stratum™ Era is subject to freeze / thaw conditions must be painted.

Stratum™ Era should not be used in situations where it will be in direct contact with snow or ice for prolonged periods

WARRANTY

We warrant that our products are free from defects caused by faulty manufacture or materials for a period of 15 years from the date of purchase. If you acquire any defective products, we will repair or replace them, supply equivalent replacement products or refund the purchase price within 30 days of receiving a valid claim subject to product inspection and confirmation of the existence of a defect by BGC. We will bear the cost of any such repair, replacement or refund.

This warranty is given by:

BGC Fibre Cement Pty Ltd
121 Bannister Rd Canning Vale WA 6155
Phone 08 9334 4900 Fax 08 9334 4749

To claim under this warranty, you must provide proof of purchase as a consumer and make a written claim (including any costs of claiming) to us at the address specified above within 30 days after the defect was reasonably apparent, or if the defect was reasonably apparent prior to installation, the claim must be made prior to installation. You may not claim under this warranty for loss or damage caused by:

- faulty or incorrect installation by non-BGC installers (BGC's installation procedures are at www.bgcinnovadesign.com.au);
- failure to comply with the Building Code of Australia or any applicable legislation, regulations approvals and standards;
- products not made or supplied by BGC;
- abnormal use of the product; or
- normal wear and tear.

The benefits available under this warranty are in addition to other rights and remedies of the consumer under the law. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage.

You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

*Components not supplied by BGC

BUSHFIRE & BOUNDARY WALL AREAS

Stratum™ Era is eminently suited for both bushfire and boundary wall applications in residential and multi residential buildings.

Stratum™ Era may be used by itself to achieve up to and including BAL 40 when fixed direct to frame as per the fixing instructions in this manual.

Stratum™ Era when used in conjunction with BGC 16mm Wet Area Fireboard will comply with the requirements of AS3959:2009 and AS1530.4 to achieve BAL FZ>10 as well as 60 minute and 90 minute boundary wall systems.

BUSHFIRE AS3959:2009 APPLICATIONS

AS3959:2009 sets out a series of Bushfire threat levels to buildings described as BAL (Bushfire Attack Levels) as follows: BAL-Low, BAL-12.5, BAL-19, BAL-29, BAL-40 or BAL-FZ (Flamezone).

Stratum™ Era may be used to achieve a BAL-40 or BAL-FZ>10 when used in conjunction with 16mm Wet Area Fireboard.

BOUNDARY/EXTERIOR WALLS

Stratum™ Era in conjunction with BGC 16mm Wet Area Fireboard can achieve both 60/60/60 and 90/90/90 FRL fire ratings from the outside as required by the BCA.

Where an exterior wall is required to achieve 60/60/60 FRL (Fire Resistance Level) from the outside, 1 layer of 16mm BGC Wet Area Fireboard installed with Stratum™ Era over the Wet Area Fireboard will meet minimum BCA requirements.

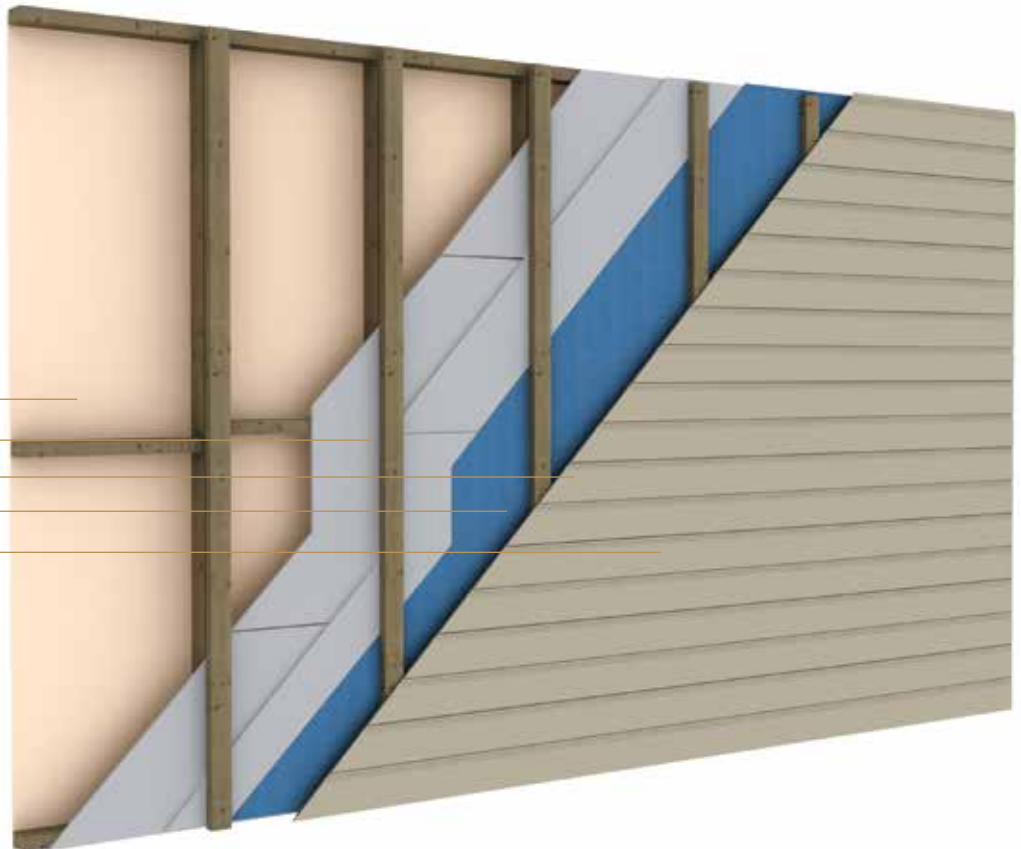
Similarly 2 layers of 16mm BGC Wet Area Fireboard used in conjunction with Stratum™ Era will achieve 90/90/90 from the outside.

NOTE // All exterior walls must have sarking beneath the Stratum™ Era. No adhesives are to be used when installing Wet Area Fireboard and the Stratum™ Era. Nails or screws must be used.

For more information please contact your nearest BGC Fibre Cement office.

FIGURE 13
BOUNDARY WALL SYSTEM

- 10mm BGC Plasterboard
- 16mm BGC Wet Area Fireboard
- 35x70 Pine Batten*
- Vapour Permeable Sarking*
- Stratum™ Era



*Components not supplied by BGC

THERMAL BREAKS

Thermal breaks are required for steel framed buildings, in walls enclosing habitable and or usable spaces. Careful consideration of thermal heat transfer and the position of thermal breaks need to be addressed by the architects, engineers and building designers.

Balustrades, parapets, and other non-enclosing wall elements may not require thermal bridging, except where the possibility of high thermal heat transfer exists through the steel CFS sections to the main structural steel element of the building.

As part of the BGC Fibre Cement range EPDM Foam Gasket is able to act as a thermal break and is required to prevent moisture ingress at sheet joins. EPDM Foam Gasket can also be used as a Thermal Break Tape and provides an R value of R 0.2 in accordance with the Building Code of Australia.

Thermal breaks are first installed to all vertical frame members (Studs) then applied horizontally to top and bottom tracks as well as any horizontal noggins.

NOTE // Thermal breaks (BGC EPDM Foam Gasket) is a self adhesive foam gasket/tape. It is installed over the building wrap (sarking).

Leave a small gap between the vertical gasket to allow any moisture to escape.

FIGURE 14
THERMAL BREAKS

Steel Frame*

EPDM Foam Gasket / Thermal Break Tape

Vapour Permeable Sarking*

Stratum™ Era



*Components not supplied by BGC

CONTACT

TO CONTACT
YOUR NEAREST
BGC STOCKIST,
PLEASE CALL:

ADELAIDE
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08 8250 4962

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TELEPHONE
0011 64 9273 1457

TECHNICAL HELP LINE
1300 652 242

BGC Fibre Cement



Quality
ISO 9001
SAI GLOBAL

**BGC FIBRE CEMENT IS A
PROUD AUSTRALIAN OWNED
MANUFACTURER OF FIBRE
CEMENT PRODUCTS.**

**BGC FIBRE CEMENT PROVIDES
BUILDERS, DEVELOPERS AND
ARCHITECTS WITH A RANGE OF
DESIGN ALTERNATIVES AND
INNOVATIVE PRODUCTS,
SUCH AS:**

EXTERIOR PRODUCTS AND APPLICATIONS INNOVA RANGE OF PRODUCTS

DURACOM™ / A compressed fibre cement facade system.

DURAFLOOR™ / Is the ultimate flooring product that can be used in both interior and exterior applications.

DURAGRID™ RESIDENTIAL & DURAGRID™ LIGHT COMMERCIAL / A light weight facade giving a modern and durable finish.

DURAGROOVE™ / A vertically grooved exterior facade panel.

DURASCAPE™ / A lightweight exterior facade base sheet with a subtle vertical shadow line.

NULINE™ PLUS / A weatherboard style cladding system.

STONESHEET™ / Purpose designed substrate for stone tile facade.

STRATUM™ / Is a trio of plank products, each of which can be used as stand alone products or used together to create a striking exterior cladding solution.

STRATUM™ ERA / A traditional, yet contemporary as it is flat weatherboard.

EXTERIOR PRODUCTS AND APPLICATIONS BGC FIBRE CEMENT RANGE OF PRODUCTS

DURASHEET™ / Ideal for the cladding of gables and lining of eaves. Can also be used on commercial soffits and cladding on non impact areas.

DURAPLANK™ / Available in Smooth, Woodgrain and Rusticated finishes, Duraplank™ is ideal for exterior cladding of upper storey conversions or ground level extensions.

DURATEX™ / A base sheet used for textured coatings on exterior wall applications.

DURALINER™ PLUS / An exterior lining board, this is the perfect substrate for tiles and is ideal for wet areas.

DURALATTICE™ / Square or diamond patterned lattice, suitable for screens, pergolas and fences.

COMPRESSED / Used for domestic, commercial sheet for wet areas, flooring, partitions, exterior decking, fascia and facade cladding.

DURALUX™ PLUS / Suitable for exterior applications where it will be sheltered from direct weather.

INTERIOR PRODUCTS AND APPLICATIONS BGC FIBRE CEMENT RANGE OF PRODUCTS

DURALUX™ PLUS / An interior lining board suitable for ceilings and soffits.

DURALINER™ PLUS / An interior lining board, this is the perfect substrate for tiles and is ideal for wet areas.

CERAMIC TILE UNDERLAY / A substrate for ceramic and slate floor tiles.

VINYL CORK FLOOR COVERINGS /
A substrate for vinyl floors.