

CERAMIC TILE UNDERLAY

FLOORING SUBSTRATE



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BGC

Fibre Cement

HISTORY & MISSION

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



BGC has state-of-the-art manufacturing facilities in Perth and distribution centres in all states of Australia and in New Zealand.

Our distribution network ensures that our entire product range is readily available in all states of Australia and in New Zealand.

BGC has a team of technical specialists that can assist with all specification and design information to help ensure that you always **'build it better with BGC'**.

BGC HAS INTERESTS IN

- / Residential and commercial building
- / Building and construction products
- / Contract mining
- / Civil engineering construction and maintenance
- / Quarrying
- / Road transport
- / Property ownership and management
- / Insurance

Our mission at BGC is simple – we want to ensure that people can always **'build it better with BGC'**.

In keeping with our mission, we are constantly assessing and improving our products to ensure that we always provide cost effective, high quality and easy-to-use products to the market.

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CERAMIC TILE UNDERLAY

FLOORING SUBSTRATE



BGC CERAMIC TILE UNDERLAY IS A SPECIALLY-FORMULATED FIBRE CEMENT SHEET. IT'S DESIGNED AS A STABLE SUBSTRATE FOR SLATE AND CERAMIC FLOOR TILES, SO YOU CAN INSTALL CERAMIC TILE FLOOR UNDERLAY OVER NEW OR EXISTING TIMBER FLOORBOARDS, PLYWOOD OR PARTICLEBOARD FLOORING.

IN DRY AREAS, APPLY TILES DIRECTLY TO CERAMIC TILE FLOOR UNDERLAY FOR AN IMPERVIOUS, EASILY-CLEANED SURFACE. IN WET AREAS AND ANYWHERE SUBJECT TO ACCIDENTAL FLOODING OR WATERSPLASH, INSTALL A WATERPROOF MEMBRANE BETWEEN THE UNDERLAY AND YOUR TILING.

CERAMIC TILE UNDERLAY

- // Specially-manufactured fibre cement sheet
- // Excellent substrate for floor tiles, both slate and ceramic
- // For dry and wet areas (see above)
- // Can be applied to both new and existing timber floorboards, plywood or particleboard

PRODUCT DESCRIPTION

BGC Ceramic Tile Underlay is a specially formulated fibre cement sheet designed to provide a stable substrate for slate and ceramic floor tiles. It can be installed over new or existing timber floorboards, plywood or particleboard flooring.

In dry areas, tiling may be applied directly to the BGC Ceramic Tile Underlay to form an impervious, easily cleaned surface.

For wet areas, and areas subject to accidental flooding or water splash, the installation of a waterproof membrane between the BGC Ceramic Tile Underlay and the tiling is required.

PRODUCT INFORMATION

BGC Ceramic Tile Underlay is manufactured from Portland cement, finely ground silica, cellulose fibres and water. It is cured in a high-pressure steam autoclave to create a durable, dimensionally stable product.

BGC Ceramic Tile Underlay is manufactured to comply with the requirements of AS 2908.2 Cellulose Cement Products. It is classified as a Type B Category 2 sheet and is suitable for internal use.

SIZE AND WEIGHT

THICKNESS (mm)	WEIGHT kg/m ²	WIDTH (mm)	LENGTH (mm)
			1800
6	8.8	900	✓
		1200	✓

Weights are based on Equilibrium Moisture Content

SHEET TOLERANCES

// Width	+0/-1mm
// Length	+0/-2mm
// Thickness	+10%/-0%
// Diagonals Difference	(Max) 2mm
// Edge Straightness	(Max) 1mm

FIRE RESISTANCE

BGC Ceramic Tile Underlay has been tested by the CSIRO – Building, Construction and Engineering Division, in accordance to Australian Standard AS1530.3 – 1989. See report number FNE 7524.

This report deemed the following Early Fire Hazard Indices:

Ignitability Index	0
Spread of Flame Index	0
Heat Evolved Index	0
Smoke Developed Index	0 ~ 1

QUALITY SYSTEMS

BGC Ceramic Tile Underlay sheets are manufactured under the rigorous Quality Management System of the International Standard ISO 9002:1994. BGC Fibre Cement is the holder of Licence Agreement number QEC2955/13.

HANDLING AND STORAGE

BGC Ceramic Tile Underlay sheets must be stacked flat, up off the ground and supported on level bearers. The sheets must be kept dry, preferably by being stored inside a building. When stored outdoors they must be protected from the weather.

Care should be taken to avoid damage to the ends, edges and surfaces.

Sheets must be dry prior to being fixed, or sealed.

MAINTENANCE

BGC Ceramic Tile Underlay when used in accordance with this literature requires no direct maintenance. However, regular checks (at least annually) must be made of the tiling system to ensure it remains watertight. Any cracked or damaged tiles, tile grout, or sealants must be repaired immediately, grouted and sealed as for new work. Any grout or sealant that is missing, cracked or likely to allow leakage, must be raked out and restored to original condition.

HEALTH AND SAFETY

BGC Ceramic Tile Underlay is manufactured from cellulose fibre, finely ground sand, Portland cement and additives. As manufactured the product will not release airborne dust. However, during drilling, cutting and sanding operations, cellulose fibres, silica and calcium silicate dust may be released.

Breathing in fine silica dust is hazardous and prolonged exposure (usually over several years), may cause bronchitis, silicosis or cancer.

AVOID INHALING DUST

When cutting sheets, work in a well-ventilated area and minimise dust generation. If using power tools, wear an approved (P1 or P2) dust mask and safety glasses.

These precautions are not necessary when stacking, unloading or handling fibre cement products.

For further information or a Material Safety Data Sheet contact the nearest BGC Fibre Cement Sales Office or go to bcginnovadesign.com.au

CUTTING AND DRILLING

Ceramic Tile Underlay sheets 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 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. It can be fitted to a 185mm circular saw, ie. Makita or similar. Please ensure safe working practices when using.



// SCORE AND SNAP

Score the sheet face 4 or 5 times with a 'score and snap' knife. Snap the sheet upward for a clean break.

// HAND GUILLOTINE

Cut on the off-cut side of the line to allow for the blade thickness.

// HAND SAWING

The back of the Ceramic Tile Floor Underlay sheet should be supported close to the cut. A fine toothed saw and a quick jabbing action gives best results. Mark out the cut lines on the face side of the sheet.

// DRILLING

Use normal high-speed drill bits. Do not use the drill's hammer function. For small round holes such as floor drains and water pipes, a hole-saw is recommended. For other penetrations, drill a series of small holes around the perimeter of the cut out. Tap out the waste piece from the sheet face with a hammer while supporting the underside of the opening to avoid damage. Clean rough edges with a rasp.

Remove any existing floor covering. The floor should be substantially flat before installing the underlay. If any floorboards are warped, cupped or misaligned, the entire floor should be coarse sanded. It is recommended that a competent tradesperson carry out the sanding.

For a good result it is essential that the floor structure is sound and not springy.

To prevent joint movement or cracking, floors should not deflect more than 1/360 of their span under maximum design loading.

For flooring laid over joists at 400mm centres this is equivalent to a deflection of 1.1mm between the joists $\{400/360 = 1.1\}$.

Any repairs required on existing floors must be completed prior to fixing the Ceramic Tile Underlay.

Likely problems include:

- // Loose floorboards – re-nail as necessary.
- // Broken or damaged floorboards – replace.
- // Damaged or rotted timbers that will not hold nails or will allow movement – replace.

The floor must be free of dirt, dust and grease before commencing to install the underlay.

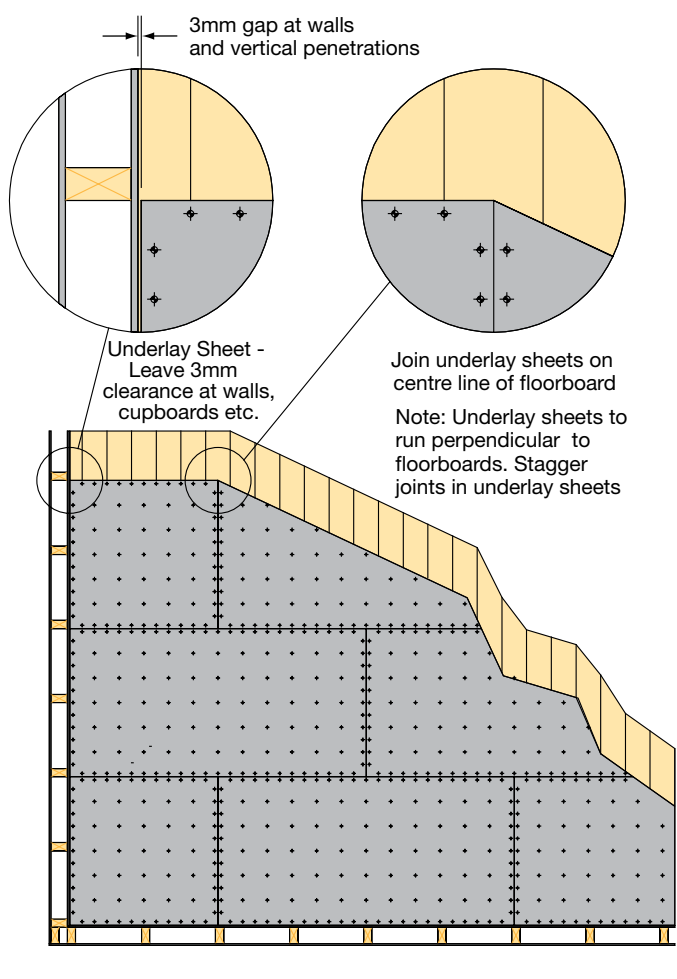
Installation of the BGC Ceramic Tile Underlay sheets or tile laying must not commence until both the flooring and its supporting framework are dry.

BGC Ceramic Tile Underlay sheets must be stacked flat, up off the ground and supported on level bearers. The sheets must be kept dry, preferably by being stored inside a building. When stored outdoors they must be protected from the weather.

Care should be taken to avoid damage to the ends, edges and surfaces.

Sheets must be dry prior to being fixed, or sealed.

FIGURE 1 // SHEET LAYOUT



For a simple layout, place a run of sheets loosely across the area to be worked. The loose lay-out allows for sheet manipulation and adjustments that will enable the optimum cutting and jointing positions to be established. Sheet edges can be overlapped as required to mimic the location of cuts.

For more complex areas a scaled layout is recommended.

Adjust the layout so that:

- // There are no narrow edge pieces (less than 200mm wide).
- // When installing over panel flooring such as plywood or particleboard, position the underlay joints so that they do not coincide with joints in the underlying floor.
- // When installing over floorboards, run the sheet length (1800mm direction) across to the run of the flooring. End joints in the underlay should coincide with the centre line of a floorboard. See Figure 1.
- // Existing construction joints or movement control joints, must be carried through the underlay and tiling. See Figure 3.
- // The underlay must finish to leave a 3mm gap at all walls and any other vertical projections in the floor.
- // The underlay should be laid in a staggered (brick) pattern. See Figure 1.
- // Except for movement control joints the sheets should butt up close to one another.

Use 2.5mm x 25mm underlay nails. Drive nail heads flush with the surface. For hardwood floorboards nailing of the underlay is sufficient.

For softwood floorboards, plywood and particleboard flooring, it is recommended that the underlay be glued to the floor with wallboard adhesive in addition to nailing.

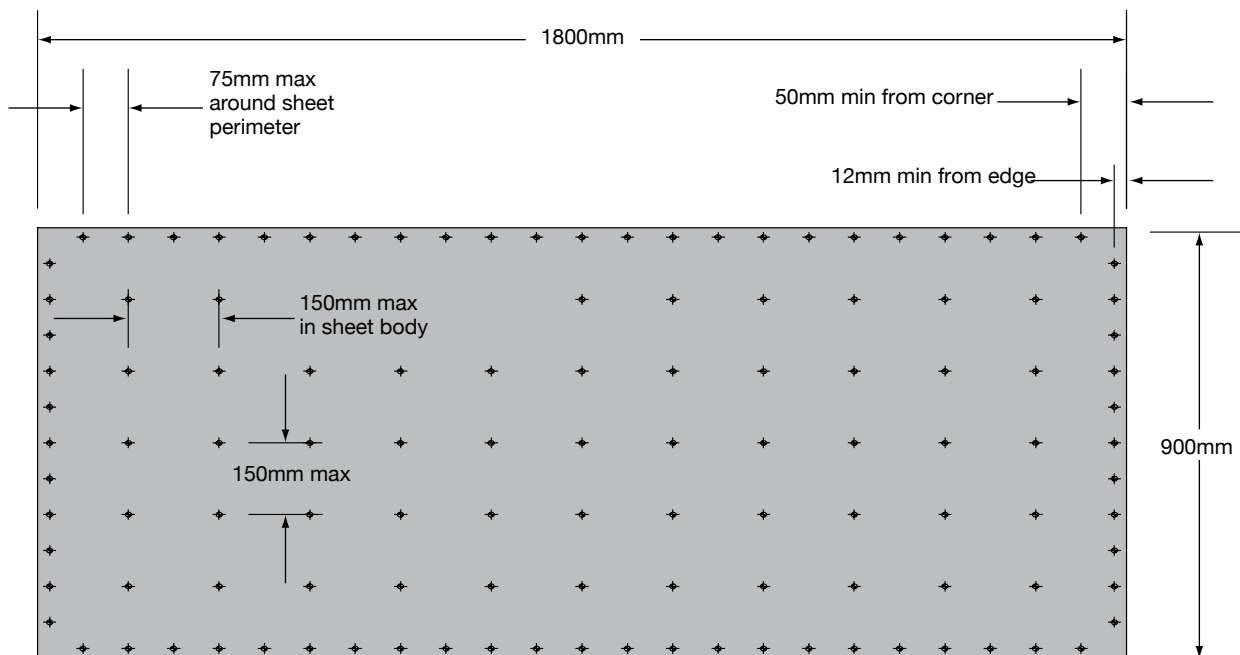
The wall board adhesive should be applied evenly over the back of the underlay sheet with a 3mm notched trowel, paying particular attention to the edges. Position and nail down the sheet. Two or three temporary nails placed towards outer sheet ends will prevent movement as sheets are nailed down.

Nailing should proceed from the centre of the sheet outwards, to ensure sheets finish flat and tight.

Nails must be at 150mm centres in the body of the sheet and 75mm centres around the perimeter. A nailing pattern is on the sheet.

Nails must be a minimum of 50mm from sheet corners and 12mm from sheet edges. See Figure 2.

FIGURE 2 //
SHEET FIXING



Note: The nailing pattern is indicated in the sheet to aid correct installation

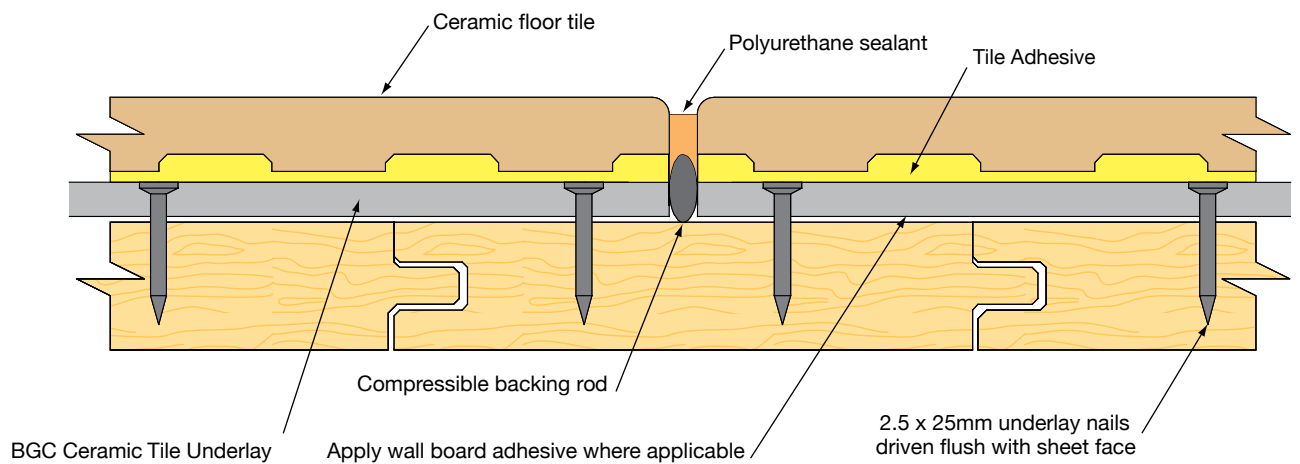
Movement control joints must be provided:

- // To coincide with any existing structural or movement control joints.
- // So that the maximum distance between control joint is less than 5m.
- // Across any doorways and openings where the tiling is carried through.
- // To coincide with changes in the room or flooring direction – such as occur in “L” shaped rooms.

As the ceramic tile system will effectively seal the top surface of the floor, it is essential that the underside of the floor is dry and well ventilated. Excessive dampness can lead to problems with the floor structure.

Any significant variation in the moisture content of the floorboards or the supporting structure may cause excessive movement and result in an unsatisfactory performance from the system.

FIGURE 3 //
MOVEMENT CONTROL JOINT



The floor space either side of a movement control joint should be approximately equal. For example, in a floor run greater than 5m and less than 10m, the joint should be near the centre of the run.

The width of movement control joints should be the same as the tile grout width (approx 3mm). The joint should extend right through the underlay, tile adhesive and a tile joint. The joint should be backed with a compressible backing rod then sealed with a good quality “Polyurethane Sealant”.

TILE LAYING

For the layout and fixing of tiles follow the tile manufacturer’s instructions.

The use of a flexible tile adhesive complying with Part 1 of Australian Standard AS2358 – 1990 is recommended.

The underlay sheets should be primed as recommended by the adhesive manufacturer.

Where movement control joints occur, they should be used as starting (or guide) lines for laying out the tiling.

WET AREAS

When BGC Ceramic Tile Underlay is used in wet areas, a waterproof membrane must be installed and the floors graded to a waste outlet.

The membrane must be installed in accordance with the manufacturer's specifications.

The waterproof membrane should:

// Continue 150mm up adjacent walls, the inside of hobs etc.

// Provide an effective seal at floor drains.

// Seal internal corners to a height of 1800mm.

Figure 4 depicts some of the features to be observed when using BGC Ceramic Tile Underlay in wet areas.

NOTE 1 – SCREED LAYER

Wet areas and areas subjected to splash must be provided with floor drains. The floors must slope to these drains (minimum fall of 1:50). Generally a screed layer will need to be installed to achieve the required falls.

Hobs must be constructed from masonry or concrete.

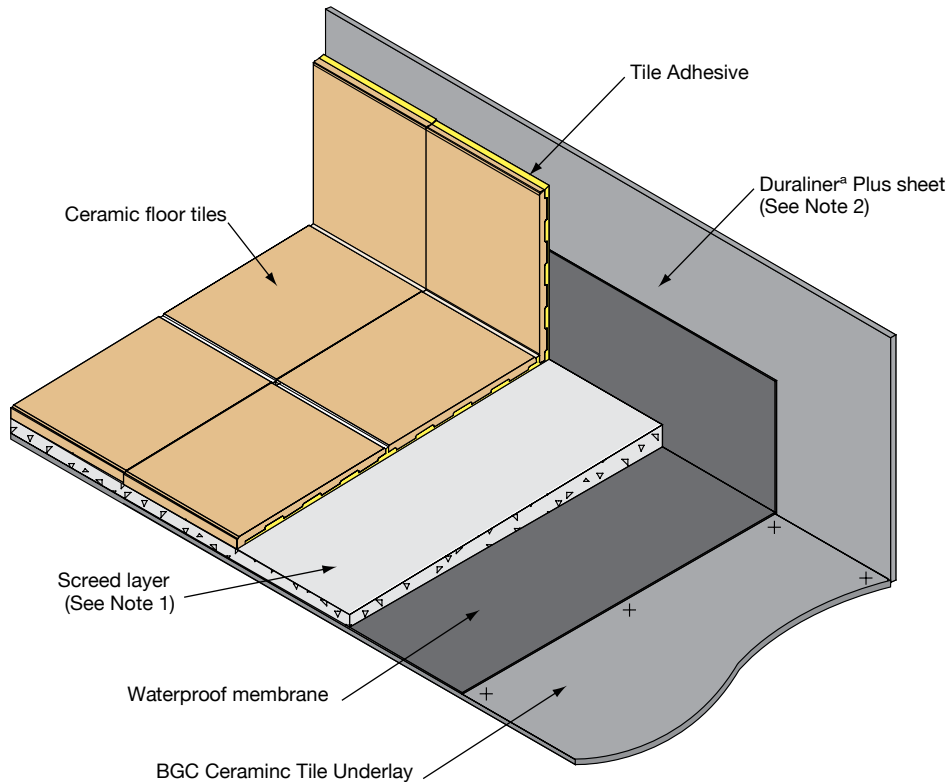
NOTE 2 – DURALINER™ PLUS

Duraliner™ Plus provides an excellent wall lining in association with BGC Ceramic Tile Underlay.

The Duraliner™ Plus should be flush jointed and tiled with ceramic tiles.

Details on the installation of Duraliner™ Plus are covered in our Duraliner™ Plus Brochure available from any BGC Fibre Cement sales office.

FIGURE 4 //
CERAMIC TILE UNDERLAY WET & WATER SPLASH AREA DETAIL



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 Canningvale 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.

TO CONTACT
YOUR NEAREST
BGC STOCKIST,
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FACSIMILE 07 3271 1733

MELBOURNE
200 MAIDSTONE STREET
ALTONA
VICTORIA 3018
TELEPHONE 03 9392 9444
FACSIMILE 03 9392 9404

PERTH
121 BANNISTER ROAD
CANNING VALE
WESTERN AUSTRALIA 6155
TELEPHONE 08 9334 4900
FACSIMILE 08 9334 4749

SYDNEY
233 MILPERRA ROAD
BANKSTOWN
NEW SOUTH WALES 2200
TELEPHONE 02 9771 9660
FACSIMILE 02 9771 9870

TECHNICAL HELP LINE
1300 652 242

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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.

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.

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.

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.

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

Build it better with BGC



Fibre Cement

Safe working practices - Please wear a P1 or P2 mask and safety goggles (approved to AS/NZW1337 standards) whilst cutting
or installing Ceramic Tile Underlay. Ceramic Tile Underlay can be safely handled during unloading or stacking without the use of these precautions.

Cleaning up - Always wet down your work area when cutting Ceramic Tile Underlay, to ensure that dust is managed.
Dispose of any vacuumed dust with care and using containment procedures.

Design by **The SHAPE Group** www.theshapegroup.com.au