



# CERAMIC TILE UNDERLAY

## FLOORING SUBSTRATE

### Technical Specification | Apr 2015

#### Product Description

BGC Ceramic Tile Floor Underlay (CTU) is a specially formulated Fibre Cement sheet designed to provide a stable substrate for slate and ceramic floor tiles. BGC Ceramic Tile Floor Underlay 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 Floor Underlay to form an impervious, easily cleaned surface.

For wet areas and areas subject to accidental flooding or water splash, the installation of a waterproofing membrane (to manufacturers' specification) is required.

#### Sheet Sizes & Mass

The approximate weight of CTU at equilibrium moisture content (7% moisture) is 9.5kg/m<sup>2</sup>. CTU is produced as a square edged, flat sheet and is available in the following tabulated sizes:

Thickness (mm)	Mass (kg/m <sup>2</sup> )	Width (mm)	Length (mm)
			1800
6	9.52	900	x
		1200	x

#### Framing and Preparation

All work should be carried out by a suitably qualified person. Prior to the installation of any CTU, ensure all existing and/or new flooring and support structure(s) are sound and in suitable condition.

Existing timber floors: Remove existing floor coverings to expose timber flooring. All flooring should be substantially flat (ideally 1mm over 1m length) and sound prior to CTU installation.

Excessive substrate movement may cause tile cracking. As a precaution all flooring and substrates must be rigid and have minimal deflection. Prior to CTU installation, make good all flooring and ensure CTU sheets and flooring are both clean and dry.

Note: CTU is not suitable for direct use on concrete floor slabs. Please contact a BGC representative for further recommended guidelines.

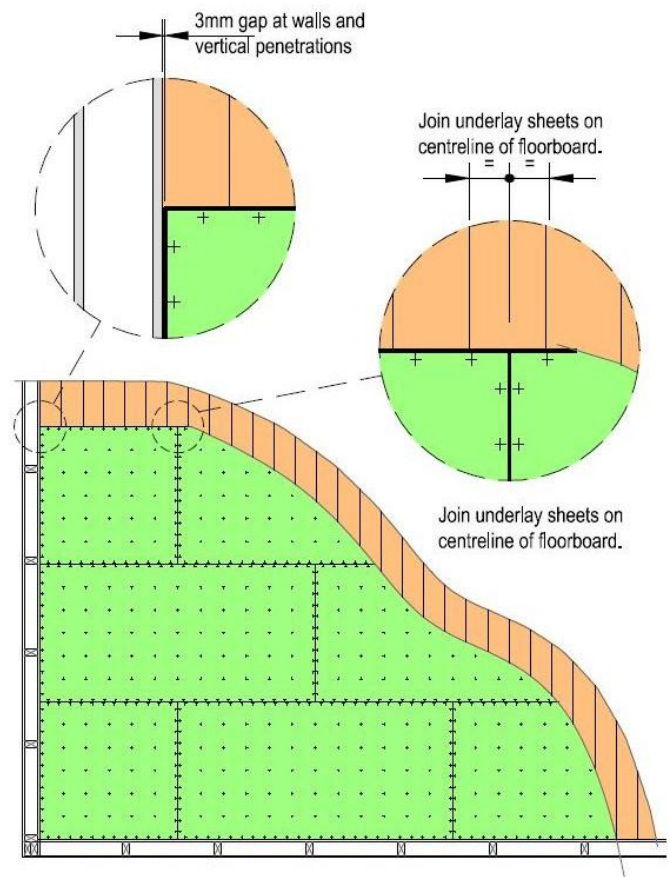
#### Under Floor Ventilation

Tiling systems will effectively seal the top surface of the floor. With this in mind it is important to ensure the subfloor has sufficient ventilation so as to avoid the potential of any unnecessary dampness.

#### Sheet Layout

- As shown in the diagram adjacent, lay CTU sheets in a staggered (brick) pattern.
- Except for control joints, all sheets should butt up close to one another.
- Ensure edge pieces are not less than 200mm wide.

- Over 'sheet' type flooring (i.e. plywood / particleboard), position CTU joints so that they do not coincide with joints in the underlying flooring.
- Over floorboards, position the CTU sheet length across the direction of the flooring beneath. Ensure end joints coincide with the centreline of a floorboard.
- Finish the CTU with a 3mm min. gap at all wall junctions and other vertical flooring projections.



#### Fixing

**Use:** 25mm x 2.5mm galvanised underlay nails or 25mm x 3.06mm galvanised coil nails.

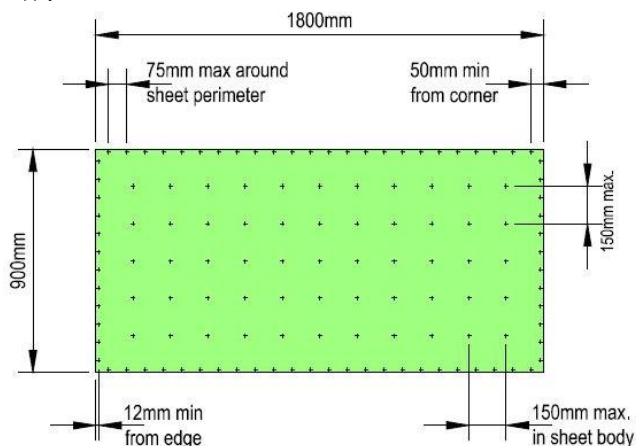
To ensure sheets finish flat and tight, nailing should proceed from the centre of the sheet outwards.

Nails must be at 150mm crs in the body of the sheet and 75mm crs around the perimeter. Nails must also be a min. of 50mm from the sheet corners and 12mm from sheet edges. For convenience a predetermined nailing pattern is on the sheet.

Drive nail heads flush with the surface.

CTU must be installed using both an adhesive and nails. An adhesive is not required when CTU is being installed over hardwood or tongue & groove timber floors.

Spread the solvent based adhesive with a 3mm notched trowel. Otherwise apply a 5mm adhesive bead at 50mm centres.



Note: nailing pattern is indicated on sheet to aid correct installation.

Note: This technical specification excludes information pertaining to the fixing of the tile system. Please refer to the tile manufacturer for instructions.

## Control Joints

To allow for any movement, control joints are required when a continuous run of flooring exceeds 5.0m in any direction. Control joints are also required at changes of direction (such as occurs in an 'L' shaped room) or at openings (such as doorways) where the tiles are to be continued through.

Where possible keep control joints symmetrical and central in location. For example, on a floor run >5.0m and <10.0m, position the control joint nearer the centre on the floor space.

Note: It is also important to ensure all 'existing' construction and control joints are also carried through the CTU sheeting and tiling.

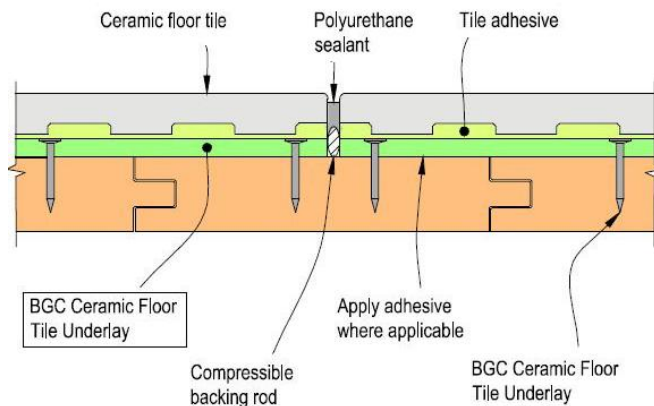
The control joint width should be kept the same as the tile grout width (approx. 3mm). **Do not** grout the control joint.

Control joints must continue through the CTU sheeting (and any tiling). The control joint should be backed with a compressible backing rod (PEF) and then sealed with a good quality flexible 'polyurethane sealant'.

**BGC Fibre Cement provides builders, developers and architects with a range of design alternatives and innovative products, such as:**

EXTERIOR PRODUCTS AND APPLICATIONS	
<b>Innova™ Range of Products:</b>	
<b>Duragrid™ Residential &amp; Duragrid™ Light Commercial</b>	A lightweight façade giving a modern and durable finish.
<b>Duracom™</b>	A compressed fibre cement façade system.
<b>Duragroove™</b>	A vertically grooved exterior façade panel.
<b>Durascape™</b>	A lightweight exterior façade base sheet with a subtle vertical shadow line.
<b>Nuline™Plus</b>	A traditional weatherboard style cladding system.
<b>Stonesheet™</b>	A purpose designed substrate for stone tile facades.
<b>Stratum™</b>	The Stratum™ series is trio of vibrant, contemporary style, shiplap weatherboard cladding systems.
<b>Stratum™ Duo</b>	
<b>Stratum™ Contour</b>	

EXTERIOR PRODUCTS AND APPLICATIONS	
<b>BGC Fibre Cement Range of Products:</b>	
<b>Durasheet™</b>	Ideal for the cladding of gables and lining of eaves.
<b>Duraplank™</b>	A weatherboard style cladding system, available in Smooth and Woodgrain finishes.



Typical Control Joint

## Wet Areas

Before tiling commences, a suitable primer and waterproof membrane must be applied to the CTU. Ensure the CTU is clean and dry prior to application. Where required, floor waste outlet(s) and screeds to form falls to the outlet(s) must also be installed.

In situations where splash zones require tiles to be continued onto a wall surface (such as tiled showers and behind vanities), BGC Duraliner™Plus provides an excellent wall lining in association with the BGC Ceramic Tile Floor Underlay. With such applications, ensure the waterproof membrane is continued as necessary at the floor and wall junction.

Note: This technical specification excludes information pertaining to the installation of waterproof membranes. Waterproof membranes and waste outlets must however be installed in accordance with the respective manufacturer's instructions.

## Warranty

BGC warrants Ceramic Tile Floor Underlay to be free from defects caused by defective manufacture or materials for a period of 15 years from the date of purchase. Furthermore, BGC warrants its products to be resistant from rotting, fire and cracking so long as the installation is carried out in accordance with BGC literature available at the time of purchase.

This warranty shall not apply to any loss or consequential loss suffered through or resulting from defects caused by defective manufacture or materials.

This warranty is subject to conditions as set out in a separate document. For a copy of this information and/or a copy of the quality control measures, please contact BGC Fibre Cement (NZ).

EXTERIOR PRODUCTS AND APPLICATIONS	
<b>BGC Fibre Cement Range of Products (Continued):</b>	
<b>Compressed</b>	Domestic or commercial sheet for wet areas, flooring, partitions, exterior decking, fascia and facade cladding.
<b>Duralux™Plus</b>	Suitable for exterior applications where it will be sheltered from direct weather.
<b>Duraliner™Plus</b>	Suitable for eaves and soffits where it will be sheltered from direct weather.
<b>Durafloor™</b>	Superb solution for interior wet areas such as bathrooms and laundries.
INTERIOR PRODUCTS AND APPLICATIONS	
<b>BGC Fibre Cement Range of Products:</b>	
<b>Duralux™Plus</b>	A square edge interior lining board. This is a perfect substrate for tiles and is ideal for wet areas.
<b>Duraliner™Plus</b>	A rebated interior lining board. This is a perfect substrate for tiles and is ideal for wet areas.
<b>Ceramic Tile Floor Underlay</b>	A substrate for ceramic and slate floor tiles.
<b>Durafloor™</b>	An ideal solution for exterior balconies and verandas.