

MARCH 2011



DURASCAPE™
BASE SHEETS



BGC | Fibre Cement

AUSTRALIAN OWNED & MANUFACTURED
WWW.BGC.COM.AU/FIBRECEMENT

INTRODUCING INNOVA™

INNOVA™ IS A BRAND NEW RANGE OF FACADE, LINING AND FLOORING WHICH WILL GIVE A NEW DIMENSION TO THE BGC PRODUCT RANGE. THE PRODUCTS WITHIN THE INNOVA RANGE HAVE BEEN DESIGNED TO INSPIRE YOU TO CREATE A NEW INNOVATIVE AND DYNAMIC FACADE OR FLOORING SYSTEM.



DURASCAPE™ IS A 9MM THICK BASE SHEET WITH A 5MM WIDE SHIPLAP JOINT GIVING IT A SUBTLE VERTICAL SHADOW LINE WHILST COVERING LARGE AREAS.

DURASCAPE™ IS QUICK TO INSTALL AND CAN BE USED IN SINGLE STOREY AND MEDIUM HEIGHT INSTALLATIONS WHERE A LARGE PANEL LOOK IS REQUIRED.

DURASCAPE™ BASE SHEETS:

- / GIVE A SUBTLE VERTICAL SHADOW LINE
- / ARE LIGHTWEIGHT AND DURABLE
- / QUICK TO INSTALL BECAUSE IT ELIMINATES THE NEED FOR TAPED AND FILLED JOINTS
- / PANELS ARE NOT AFFECTED BY TERMITES, AIR, STEAM, SALT OR SUNLIGHT
- / CAN BE FINISHED IN A RANGE OF DECORATIVE COATINGS



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APPLICATIONS

Durascape™ is a strong and durable base sheet which has a subtle shiplap vertical joint that is suitable for finishing with a range of decorative coatings.

Durascape™ is suitable for low to medium rise buildings and can be used on both timber and steel framed buildings. It is also ideal for renovations and alterations to existing dwellings.

ADVANTAGES

- / Gives a subtle 5mm vertical shadow line
- / Is lightweight and durable
- / Quick to install because it eliminates the need for taped and filled joints and vertical set joints
- / Panels are not affected by termites, air, steam, salt or sunlight

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 affect 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 steel frame and the Durascape™ panels. Thermal break tapes should have a minimum R-Value of 0.2.

PRODUCT INFORMATION

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

Durascape™ panels are manufactured to the Australian / New Zealand Standard AS/NZS 2908.2-2000 Cellulose-Cement Products, Part 2: Flat sheets and Durascape™ 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:

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

FINISHING

Paint & Coatings Manufacturers such as Dulux, Watty, Taubmans, Macs Architectural Coatings and Acryloc manufacture decorative coatings that are recommended for Fibre Cement substrates. Please refer to the manufacturer for details. Always follow the manufacturer's instructions prior to applying coatings.

DURABILITY

BGC Durascape™ physical properties make it a very durable product.

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

Vapour permeable sarking must be installed in accordance with the AS/NZS 4200.2 – 'Pliable building membranes and underlays – Installation' and the sarking manufacturer's 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

Durascape™ panels have relatively low thermal conductivity: R-value. At Equilibrium Moisture content the approximate R-Value of Durascape™ is:- 0.55 W/m°C.

WEATHER RESISTANCE / FREEZE THAW

Durascape™ conforms to the Building Code of Australia (BCA) requirements for external wall applications. Durascape™ facade system has been tested to AS/NZS 4284 Testing of Building Facades.

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

PANEL SIZES AND MASS

THICKNESS mm	MASS KG/M ²	WIDTH mm	LENGTH mm	
			2450	3000
9	12.5	900	x	x
		1200	x	x

SHEET TOLERANCES

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

HANDLING AND STORAGE

Durascape™ 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.

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





EXTRA CARE MUST BE TAKEN AT THE SHEET EDGES TO PREVENT CRACKING OF THE SHIPLAP JOIN.

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

EPDM FOAM GASKET (Used to prevent moisture ingress at sheet joins).	25m	
INTERNAL CORNER	3000mm	
EXTERNAL CORNER	3000mm	
HORIZONTAL FLASHING	3000mm	

FASTENERS

DURASCAPE™ TO TIMBER FRAME

2.8 x 30mm Fibre Cement Nail
(minimum Class 3 corrosion resistant)



2.8 x 40mm Gun Nail
(minimum Class 3 corrosion resistant)



/ Screws should be countersunk 1.5mm and filled with BGC Exterior Finishing Compound or epoxy filler such as Megapoxy P1, Hilti CA125 or Hilti CA273 and sanded flush to provide a flat surface for finish coating.

/ Nails must be driven flush to the panel surface.

DURASCAPE™ TO STEEL FRAME

To Steel – 0.75BMT
No 8 x 30mm Countersunk Self Drilling
(minimum Class 3 corrosion resistant)



To Steel - 0.8-1.6BMT
8 x 32mm Wingtek Self Embedding Head Screw
(minimum Class 3 corrosion resistant)



CONSTRUCTION DETAILS

FRAMING

Durascape™ panels can be installed vertically 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 recommend a maximum tolerance of 3mm-4mm in any 3000mm length of frame.

Durascape™ will not straighten excessively warped or distorted frames and any warping may still be visible after Durascape™ is applied. Warped framing will require remedial action.

FRAME STRAIGHTNESS



TIMBER FRAMES

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 sheets and frames to move up.

“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

The framing width at sheet joints must be a minimum of 45mm. The intermediate support studs should be a minimum width of 35mm.

LIGHTWEIGHT STEEL FRAMES

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

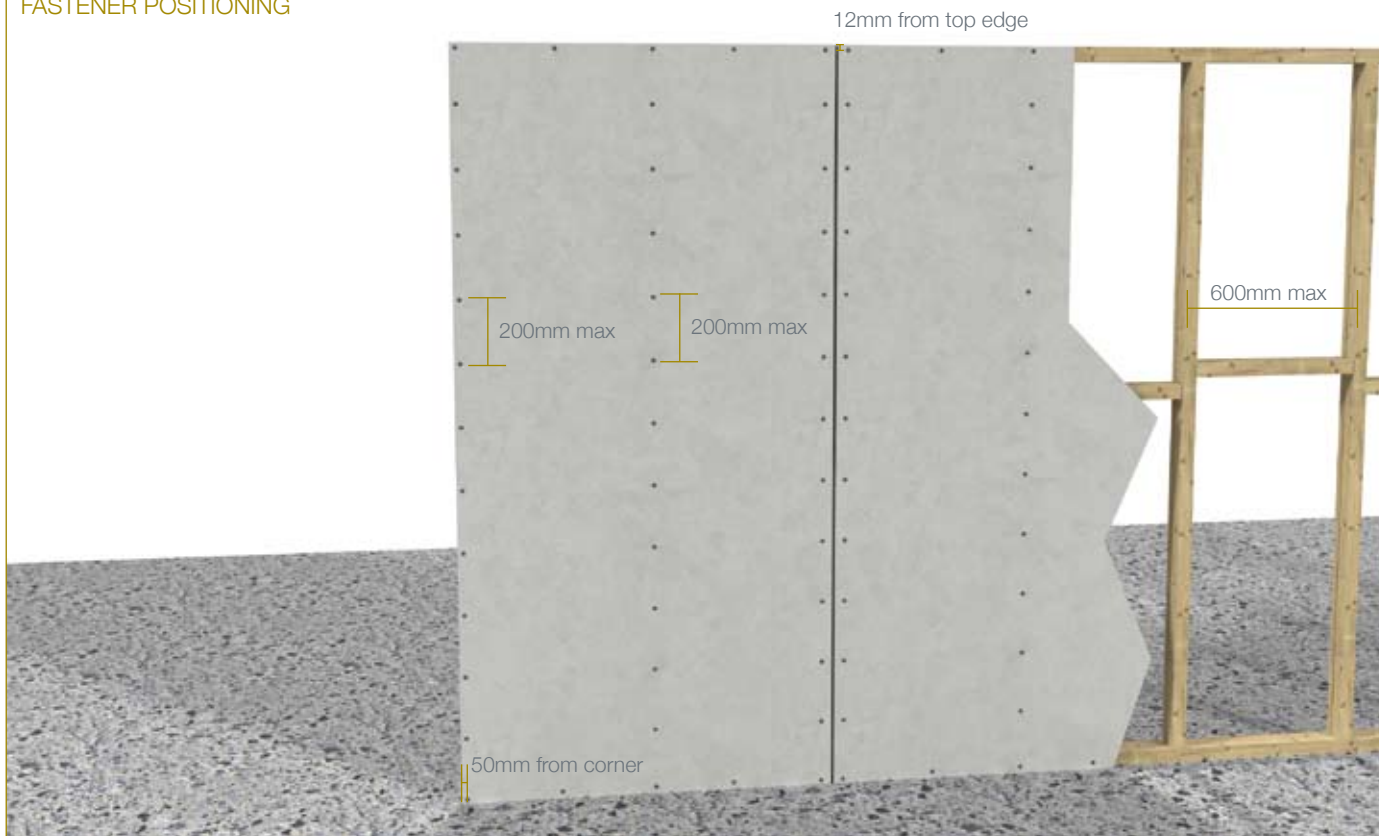
Framing members must have a Base Metal Thickness (BMT) between 0.50 to 1.6mm. The steel framing must have the appropriate level of durability required to prevent corrosion.

The framing width at sheet joints must be a minimum of 50mm. The intermediate support studs should be a minimum of 64 x 35mm.

MAXIMUM STUD & FASTENER SPACING

Wind Classification AS4005	GENERAL AREAS OF WALLS (MM)		WITHIN 1200MM OF BUILDING EDGES (MM)	
	Stud Spacing (mm)	Fastener Spacing	Stud Spacing	Fastener Spacing
N1, N2, N3, N4	600	200	600	200
N5	450	200	300	150
N6	450	150	300	125
C1, C2	600	200	600	200
C3	450	200	300	150
C4	450	150	300	125

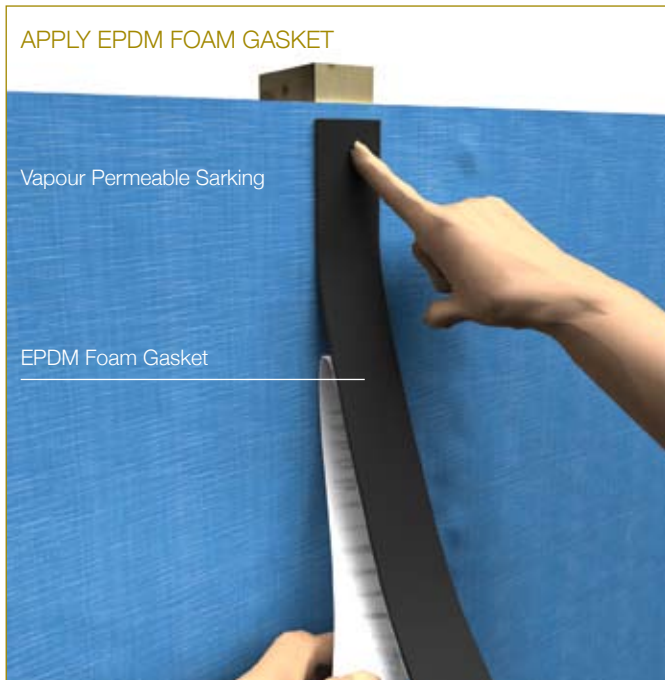
FASTENER POSITIONING



Durascape™ panels should be installed vertically with all sheet edges fully supported. The centre joints must coincide with the

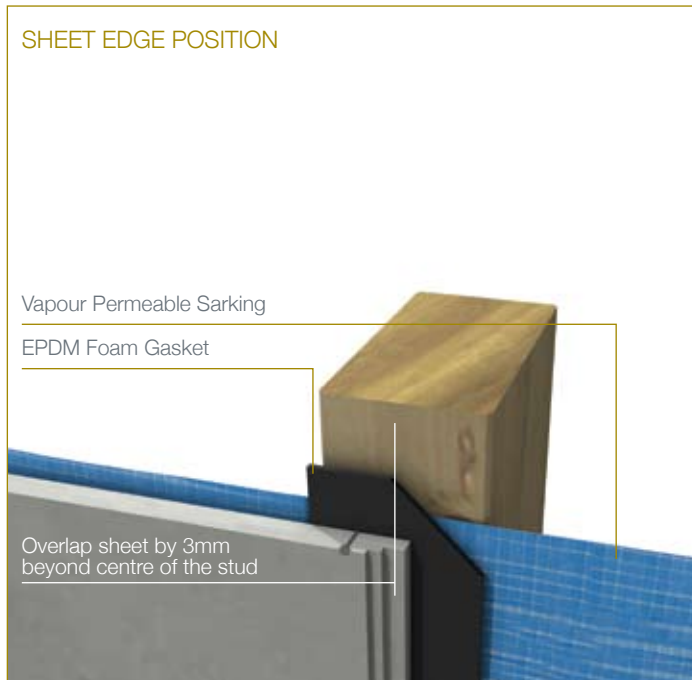
centre lines of the framing member and all sheets should be installed in one direction.

APPLY EPDM FOAM GASKET



At every vertical joint, fix a continuous strip of EPDM Foam Gasket to the vapour permeable sarking along the stud. This assists to prevent the ingress of moisture at the sheet joints.

SHEET EDGE POSITION



Position the underlap sheet on every stud 3mm past the centre of the stud to ensure the fasteners fixed at the edge of the sheet have adequate distance into the stud.

INSTALLATION

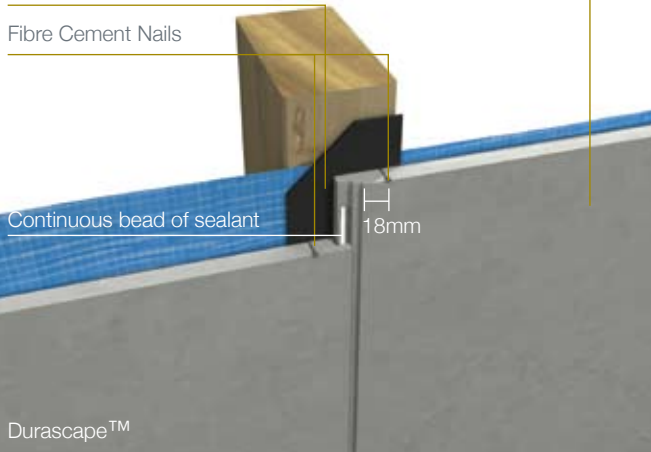
As detailed on p6, there are several different fasteners that can be used to fix Durascape™ panels.

FIBRE CEMENT NAIL FIXING – TIMBER FRAME

Vapour
Permeable
Sarking

EPDM Foam Gasket

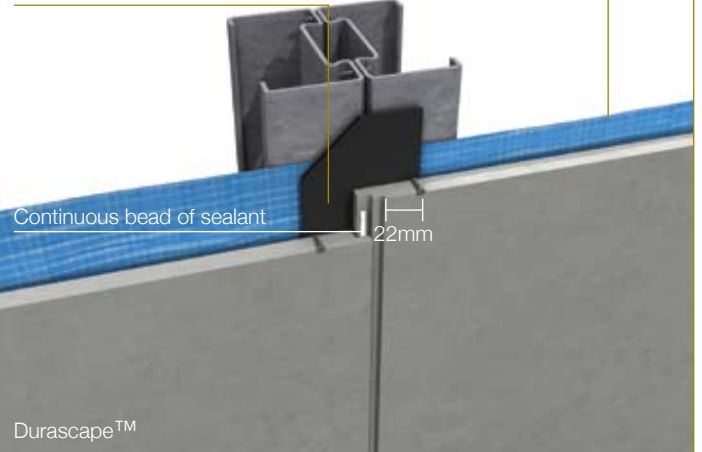
Fibre Cement Nails



FLUSH SCREW – LIGHTWEIGHT STEEL FRAME

Vapour
Permeable
Sarking

EPDM Foam Gasket

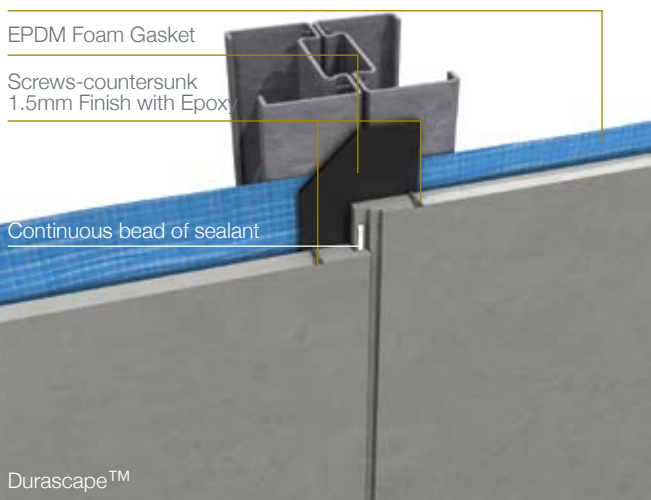


COUNTERSUNK SCREW – LIGHTWEIGHT STEEL FRAME

Vapour
Permeable
Sarking

EPDM Foam Gasket

Screws-countersunk
1.5mm Finish with Epoxy



INSTALLATION

To fix the first sheet, set in place ensuring the required edge distances are maintained.

FIX FIRST SHEET

Vapour Permeable Sarking

EPDM Foam Gasket



Apply of continuous 4mm bead of sealant to the edge of the shiplap join.

APPLY SEALANT

Vapour Permeable Sarking

EPDM Foam Gasket

4mm continuous bead of sealant



FIX NEXT SHEET

Vapour Permeable Sarking

EPDM Foam Gasket



Once both sheets are fixed, check the joint for gaps and fill with additional sealant if required.

INSTALLATION DETAILS

The architectural intent and details of buildings vary from one designer to the next, and the variety of facade details would be impossible to catalogue.

The detail diagrams following are intended to assist the designer in achieving a high quality weather resistant Durascape™ installation.

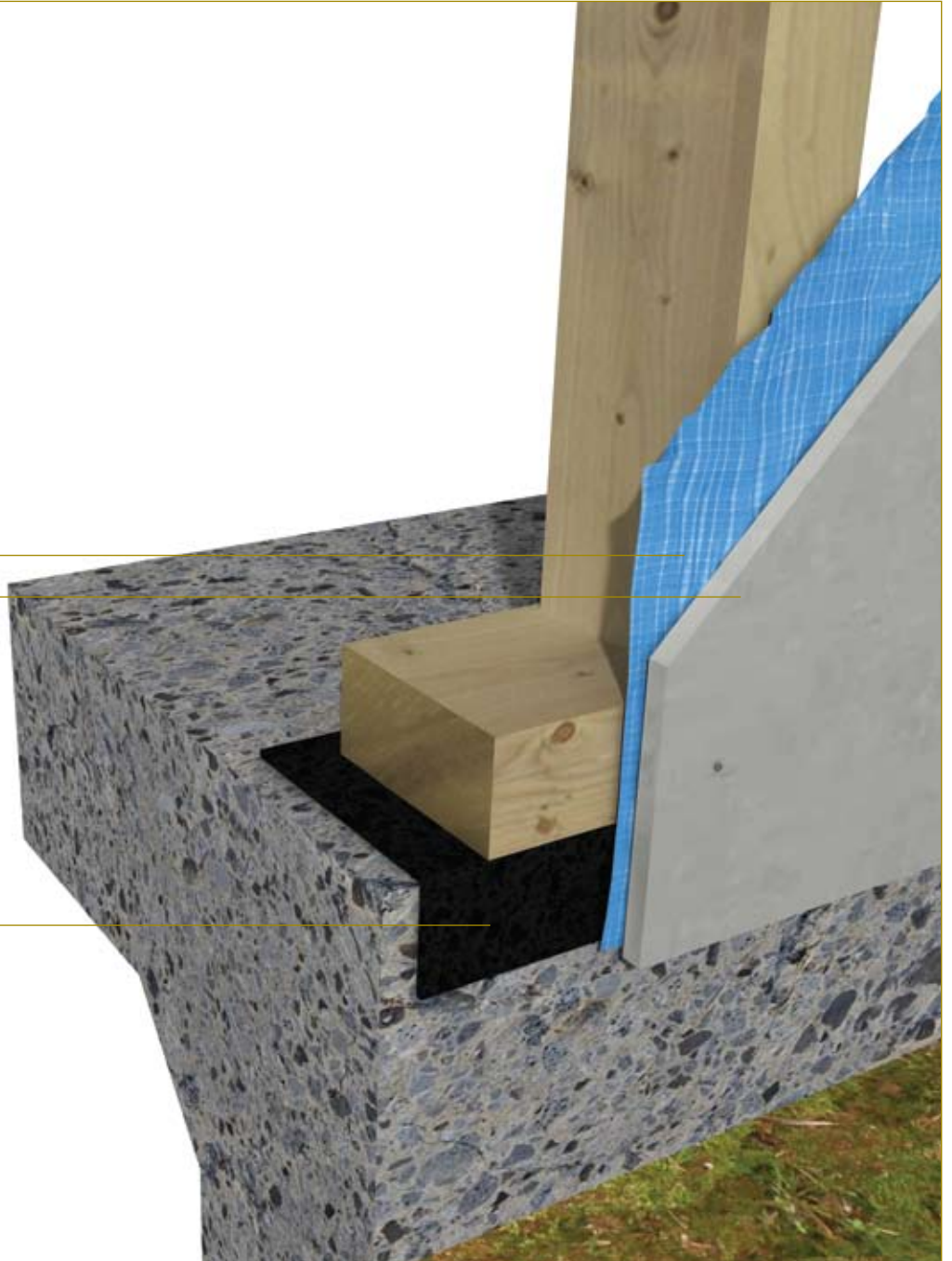
The designer should not digress from the specification set out in this manual.

SLAB EDGE/EAVE JUNCTION

Vapour Permeable Sarking

Durascape™

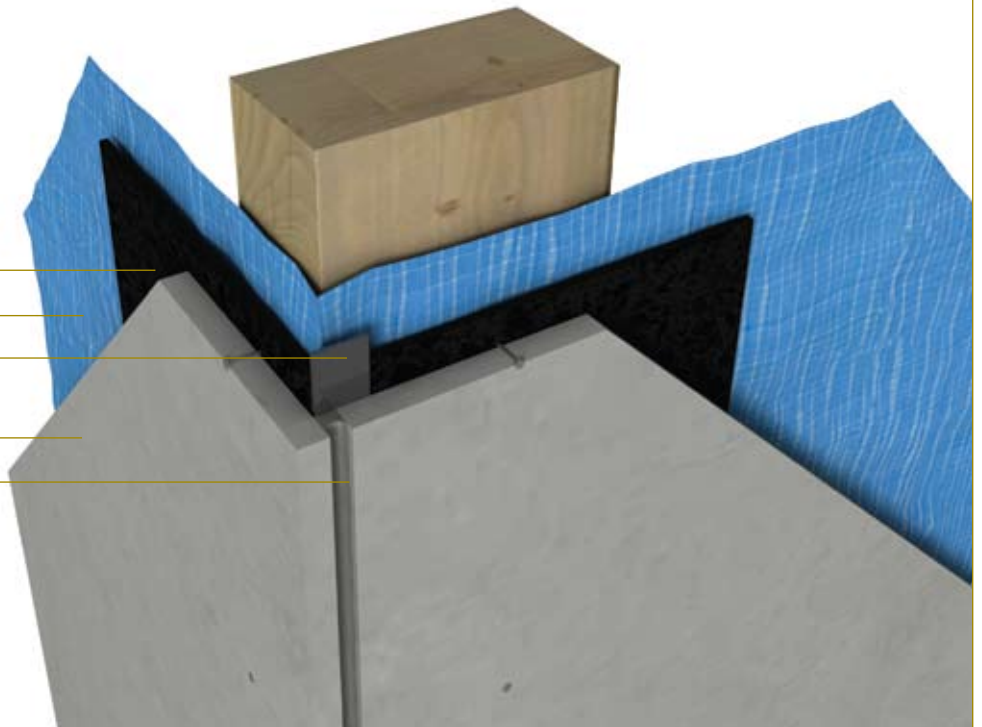
Damp Course



INSTALLATION DETAILS

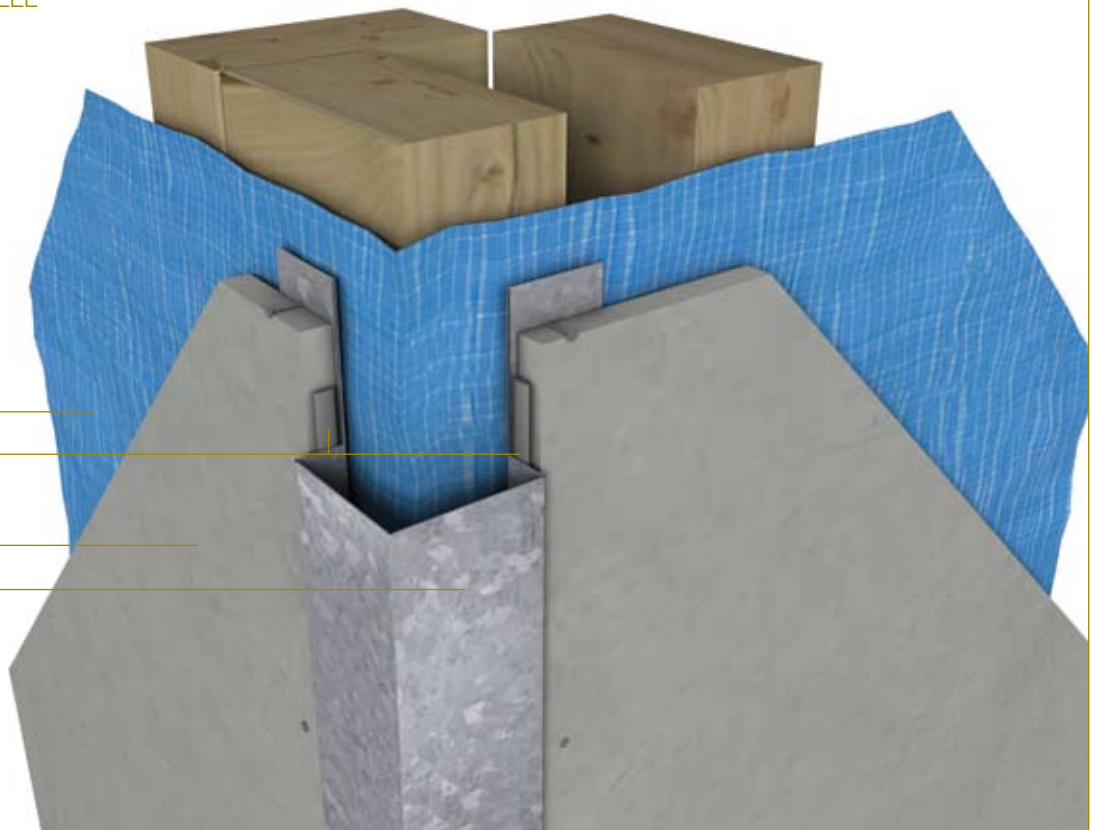
EXTERNAL CORNER – SEALANT OPTION

- Corner flashing (supplied by others)
- Vapour Permeable Sarking
- Bond Breaker Tape (supplied by others)
- Durascape™
- Continuous bead of sealant



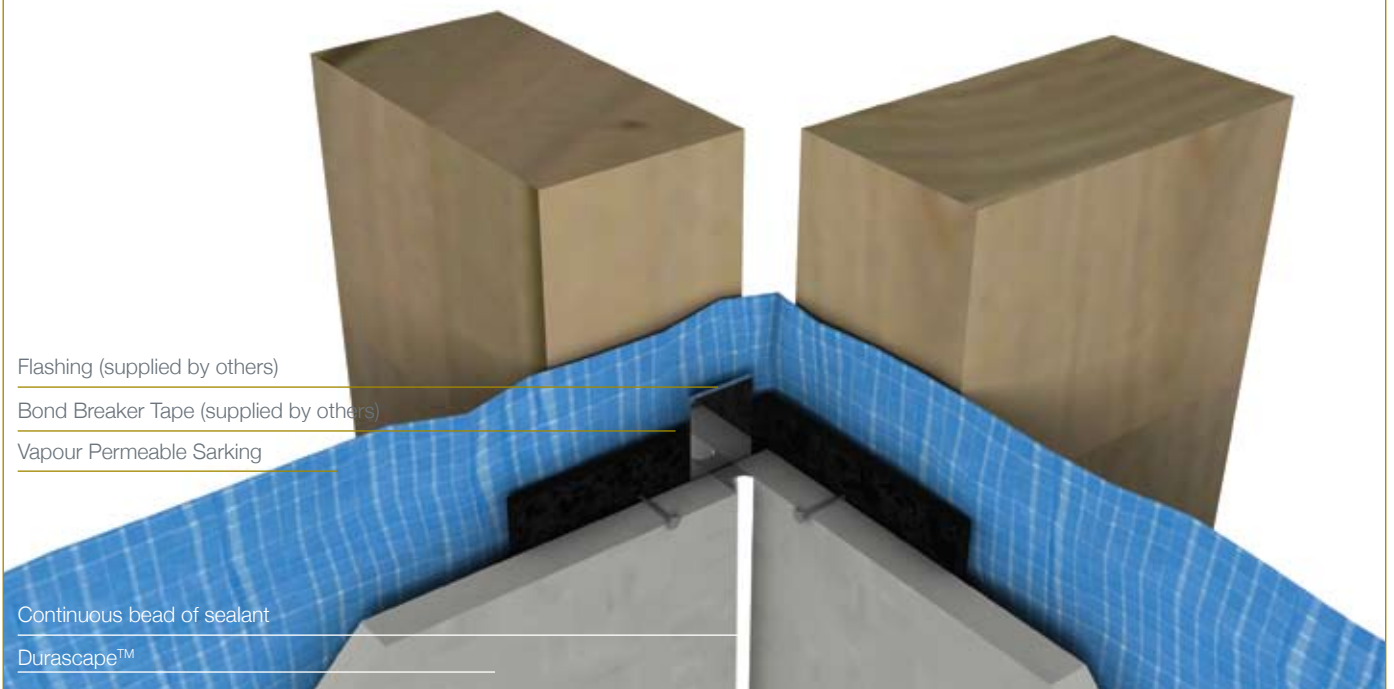
EXTERNAL CORNER – STEEL

- Vapour Permeable Sarking
- Continuous bead of sealant
- Durascape™
- BGC External corner angle

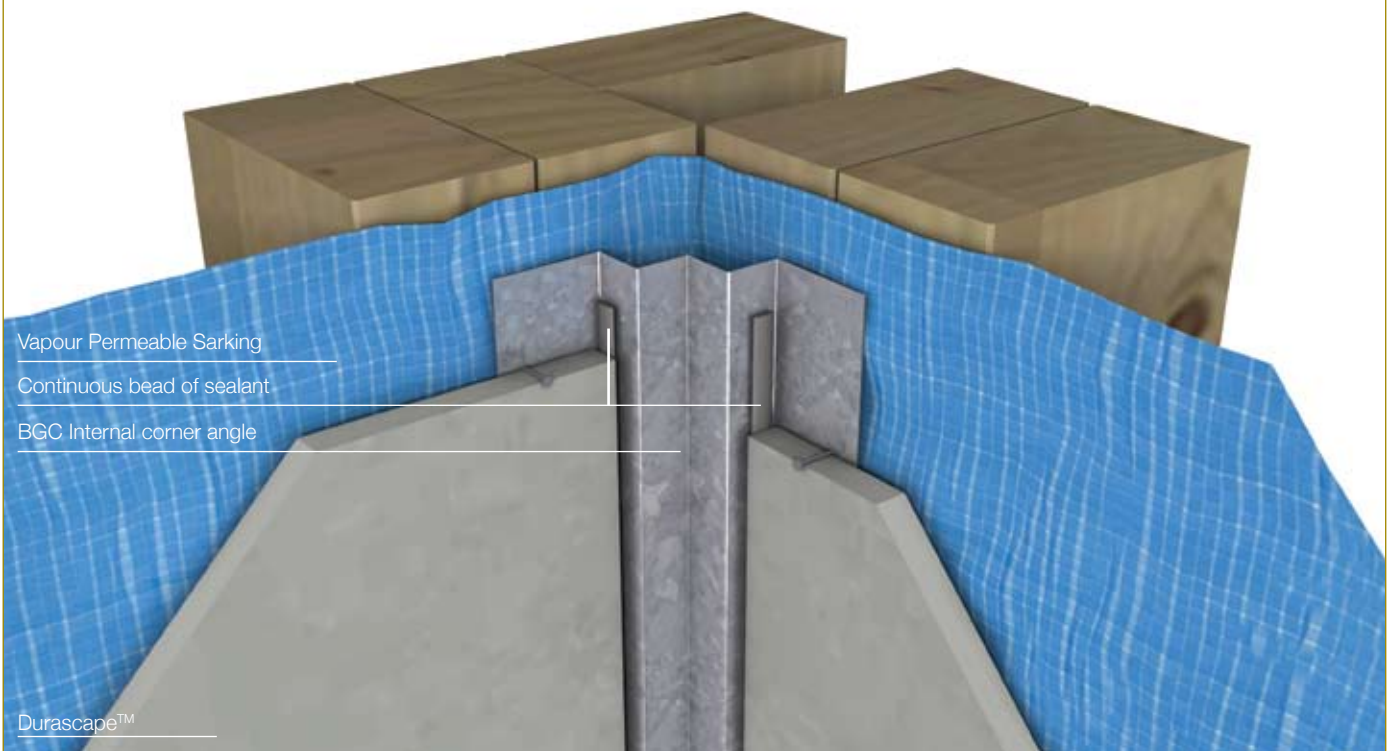


INSTALLATION DETAILS

INTERNAL CORNER – SEALANT OPTION



INTERNAL CORNER – STEEL



INSTALLATION DETAILS

WINDOW HEAD

Continuous bead of sealant

Vapour Permeable Sarking

Optional trim (supplied by others)

Flashing



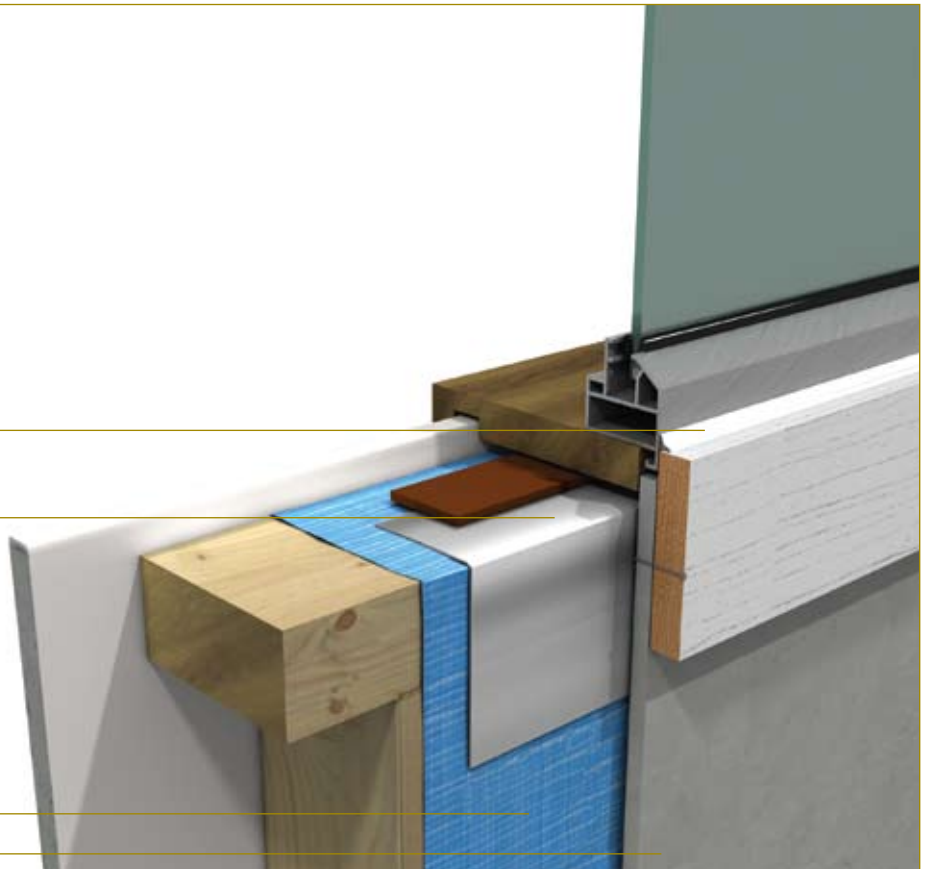
WINDOW SILL

Continuous bead of sealant

Flashing

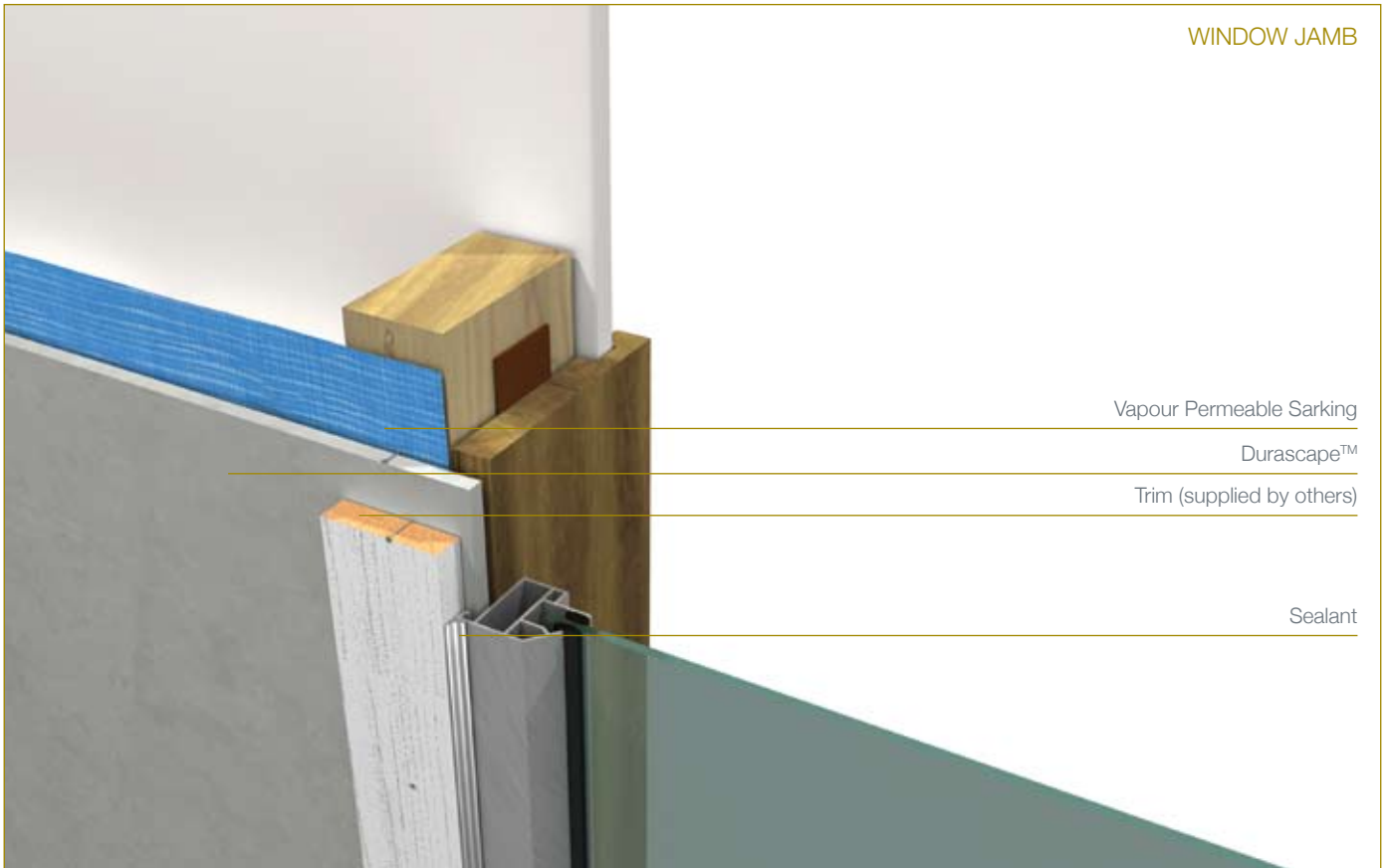
Vapour Permeable Sarking

DurascapTM

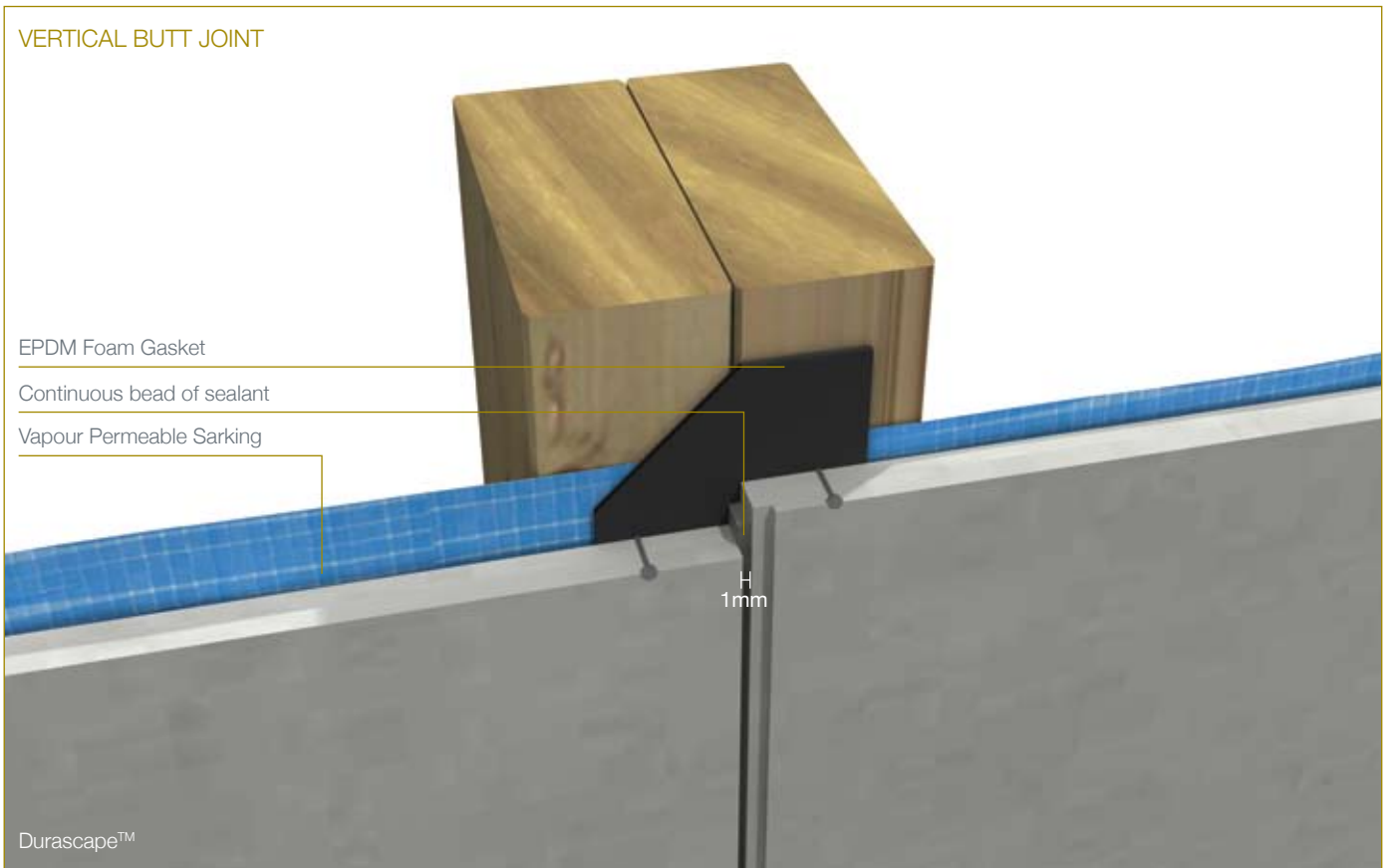


INSTALLATION DETAILS

WINDOW JAMB



VERTICAL BUTT JOINT



INSTALLATION DETAILS

LOWER FLOOR JUNCTION

Flooring

Vapour Permeable Sarking

Durascape™

Damp Course



UPPER FLOOR JUNCTION

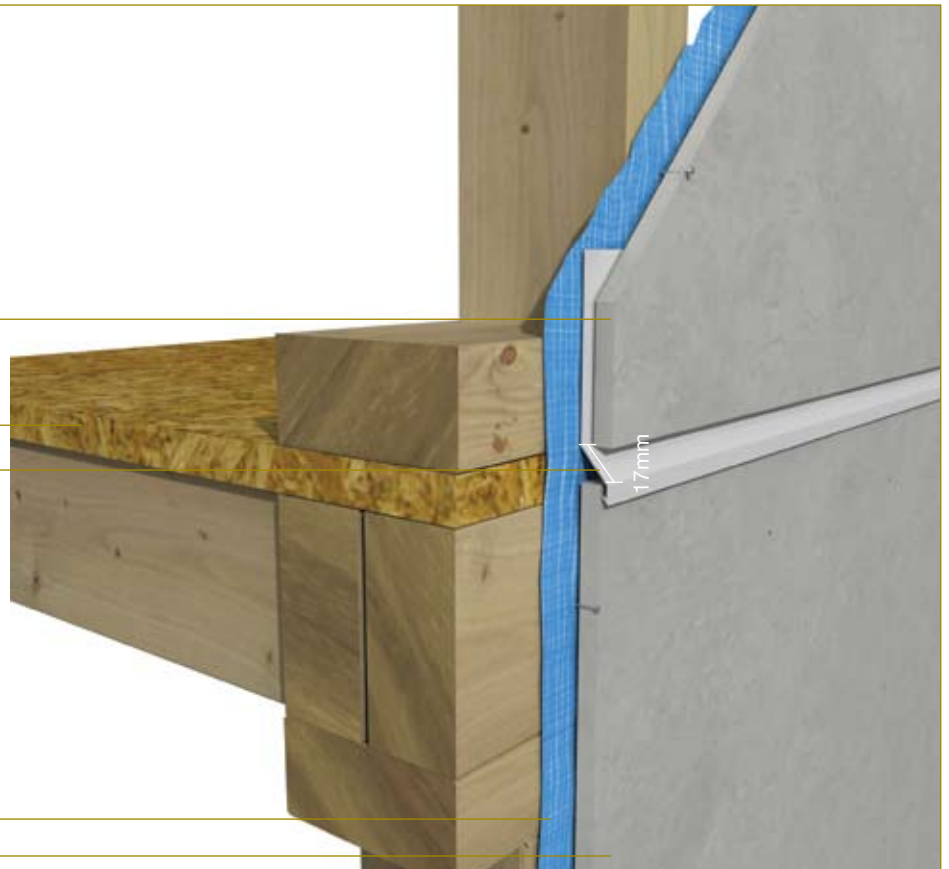
Durascape™

Flooring

BGC Horizontal Flashing

Vapour Permeable Sarking

Durascape™



INSTALLATION DETAILS

UPPER FLOOR JUNCTION – OPTION 2

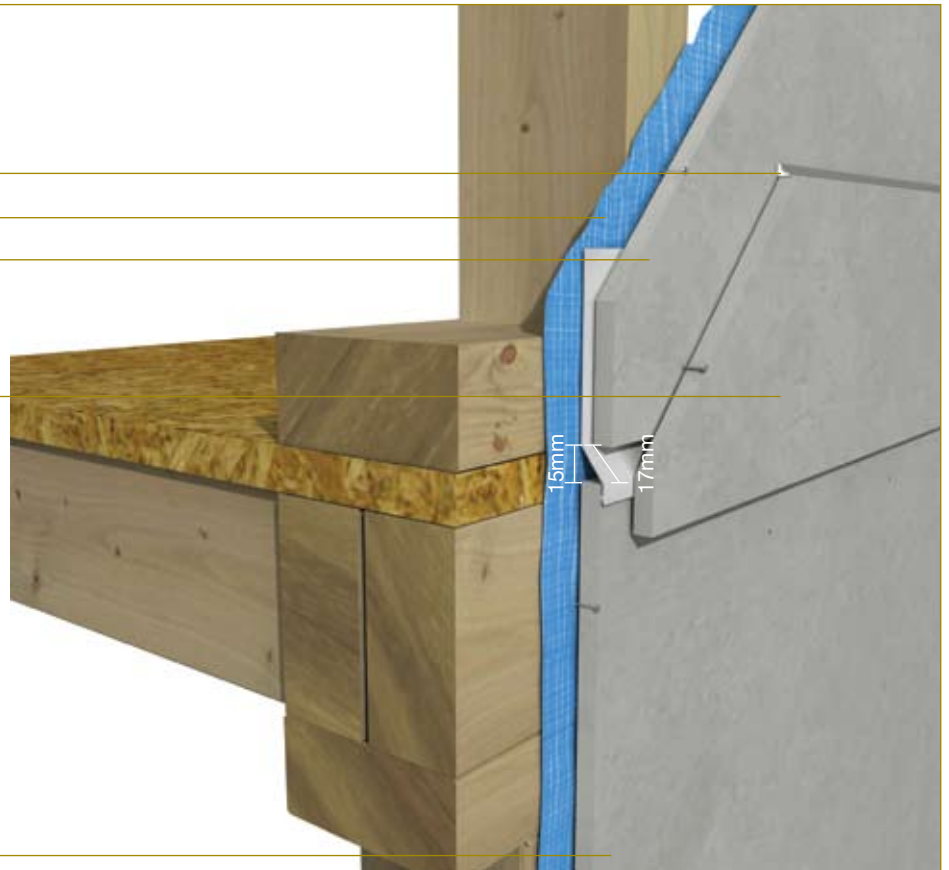
Continuous bead of sealant

Vapour Permeable Sarking

Durascape™

Architectural profile or similar

Durascape™



HORIZONTAL JUNCTION 1

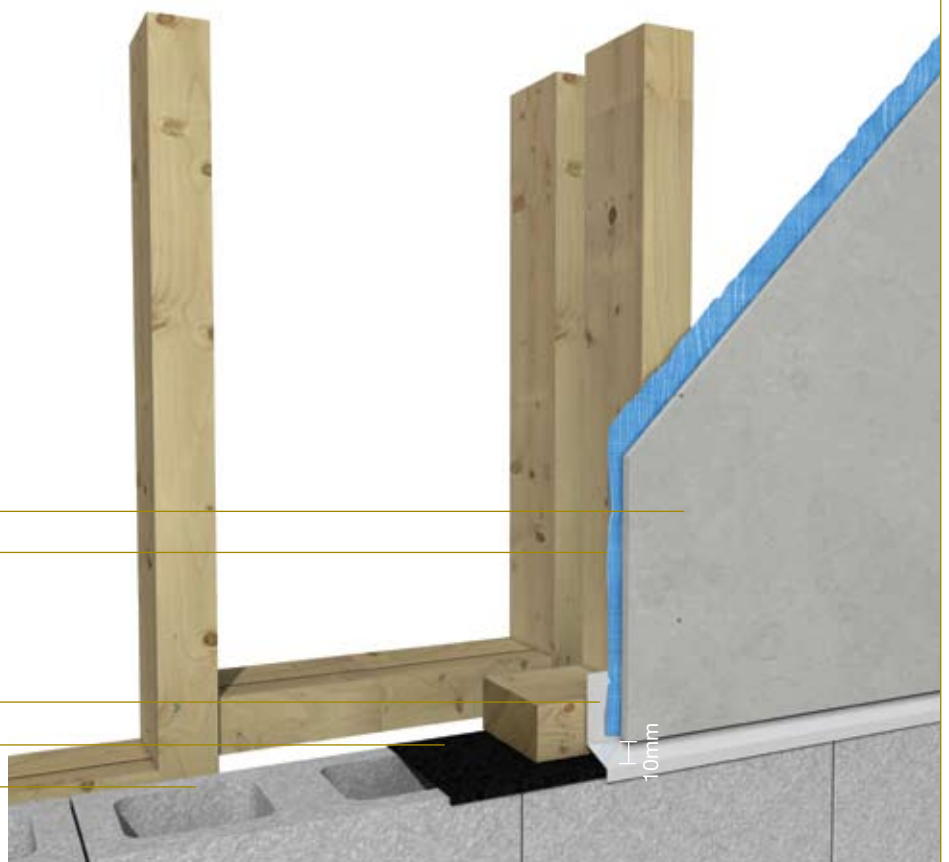
Durascape™

Vapour Permeable Sarking

Suitable flashing (supplied by others)

Damp course

Masonry wall



INSTALLATION DETAILS

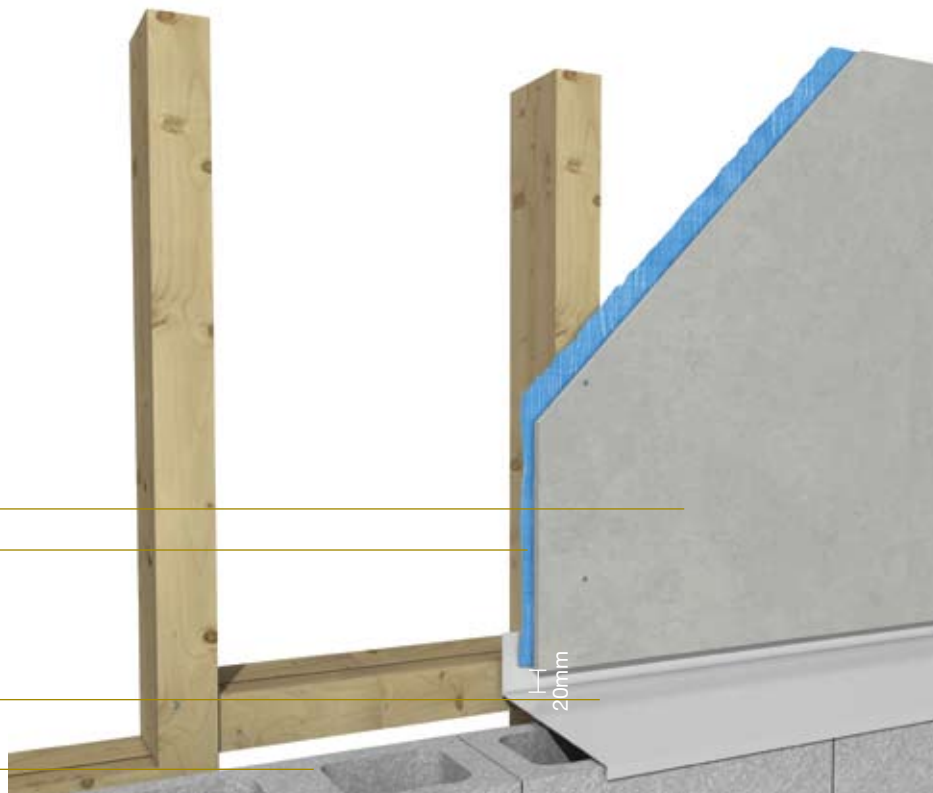
HORIZONTAL JUNCTION 2

Durascape™

Vapour Permeable Sarking

Suitable flashing (supplied by others)

Masonry wall



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.

MOISTURE MANAGEMENT

Designers, specifiers and builders have a duty of care to identify moisture-associated risks with any individual building design.

Wall construction design should consider both the interior and exterior environments of the building to effectively manage moisture. Special consideration should be given to buildings that are in extreme climates or at higher risk of wind driven rain.

In addition, all wall openings, penetrations, junctions, connections, window heads, sills and jambs must incorporate appropriate flashing for waterproofing. All other components, materials and installation methods used to manage moisture in walls should comply with the relevant standards of the Building Code of Australia (BCA).

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 6970
Phone 08 9334 4900 Fax 089334 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 bgc.com.au/FibreCement);
- 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.

BUSHFIRE AND BOUNDARY WALL AREAS

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

BGC Durascape™ can be used as a stand alone product to achieve up to BAL 40 when fixed direct to frame as per the fixing instructions in this manual.

BGC Durascape™ 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).

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

BOUNDARY/EXTERIOR WALLS

BGC Durascape™ 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.

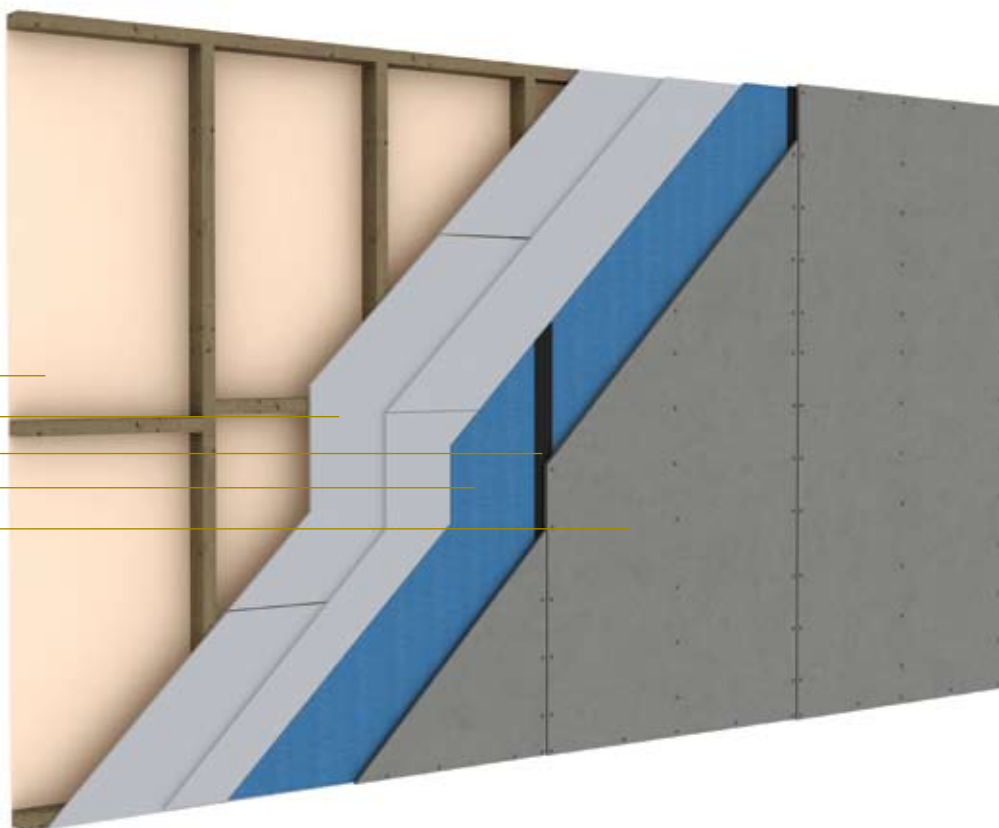
Where an exterior wall is required to achieve 60/60/60 FRL (Fire Resistance Level) from the outside, 1 layer of 16mm BGC Wet Area Fireboard installed with BGC Durascape™ over the Wet Area Fireboard will meet minimum BCA requirements. Similarly 2 layers of 16mm BGC Wet Area Fireboard used in conjunction with BGC Durascape™ will achieve 90/90/90 from the outside.

NOTE: All external walls must have sarking beneath the BGC Durascape™. No adhesives are to be used when installing Wet Area Fireboard and the BGC Durascape™. Nails or screws must be used.

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

BOUNDARY WALL SYSTEM

- 10mm BGC Plasterboard
- 16mm BGC Wet Area Fireboard
- EPDM Foam Gasket
- Vapour Permeable Sarking
- Durascape™



CONTACT

TO CONTACT
YOUR NEAREST
BGC STOCKIST,
PLEASE CALL:

ADELAIDE
TELEPHONE
08 8250 4962

BRISBANE
TELEPHONE
07 3271 1711

MELBOURNE
TELEPHONE
03 9392 9444

PERTH
TELEPHONE
08 9334 4900

SYDNEY
TELEPHONE
02 9632 2100

NEW ZEALAND
TELEPHONE
0011 64 9264 1457

TECHNICAL HELP LINE
1300 652 242



Quality
Endorsed
Company

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

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

DURACOM™ / A compressed fibre cement facade system.

DURAGROOVE™ / A vertically grooved exterior facade panel.

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

NULINE™ / A weatherboard style cladding system.

STONESHEET™ / Purpose designed substrate for stone tile facade.

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

DURALINER™ / Suitable for eaves and soffits where it will be
sheltered from direct weather.

INTERIOR PRODUCTS AND APPLICATIONS

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

DURALINER™ / 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.