



# cemintel™

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CEMINTEL™

CONSTRUCTAFLOOR™ WET AREA FLOORING



FC:533



RESIDENTIAL INTERNAL WET AREA FLOORING SYSTEM

MARCH 2015

Cemintel Constructafloor™ Wet Area flooring is an advanced, lightweight, fibre cement flooring that offers both speed and quality in construction with significant time savings.

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## DESCRIPTION

Cemintel Constructafloor™ Wet Area flooring is an advanced, lightweight, fibre cement flooring sheet. Constructafloor™ Wet Area flooring has a flat surface with a tongue and grooved joint to the two long edges of the sheet. These edges are coloured yellow for easy identification. Constructafloor™ Wet Area flooring can be installed with a pneumatic nail gun for ease of installation.

The joint between sheets is filled with flexible sealant to provide a flat surface suitable to accept a wide range of surface toppings.

Cemintel Constructafloor™ Wet Area flooring conforms to the requirements of AS 2908:2 Cellulose – cement products, Part 2: Flat sheets for Type B Category 2.

## APPLICATIONS

Cemintel Constructafloor™ Wet Area flooring is a high strength, durable building product that is impervious to water. It can be fixed directly to structural framing to form a substrate for all domestic wet area applications. It is also suitable for interior flooring in non-wet areas.

When combined with a suitable waterproofing system, Cemintel Constructafloor™ Wet Area flooring offers a BCA compliant waterproof solution which may be covered with your selection of tiles or decorative finishes in a range of applications including:

- Bathrooms
- Ensuites
- Laundries

Cemintel Constructafloor™ Wet Area flooring offers proven, reliable and cost effective solutions to all internal residential wet areas and other tiled areas.

Constructafloor™ Wet Area flooring may be finished with carpet or sheet vinyl in areas that are not required to be waterproof.

## ADVANTAGES

- Simple and quick to install using screw or gun-nail fixings
- Tough durable substrate for wet areas
- Suitable for all tiled floor areas
- Lightweight and economical building material
- Immune to permanent water damage
- Will not rot, warp or burn
- Immune to termite attack
- Ideal for upper storey construction
- Available in a range of sheet sizes to reduce waste

## COMPONENTS

### CEMINTEL CONSTRUCTAFLOOR™ WET AREA SHEET

Cemintel Constructafloor™ Wet Area Sheet is 19mm thick and has an approximate mass of 25.5 kg/m<sup>2</sup>. Sheets are available in the following sizes for interior wet area applications.

Order N°	Product
115657	600 x 2700mm
115658	900 x 1800mm

### PROPERTIES

Specification	Value
Thickness (19mm nominal)	-0/+0.3 mm
Mass (nominal)	25.5 kg/m <sup>2</sup>
Sheet Width	-3 /+0 mm
Sheet Length	-3/+0 mm
Diagonal Difference (max.)	3 mm

## COUNTERSINKING TOOL

A tungsten carbide tipped tool specifically designed for drilling and countersinking.

Order N°	Description
22116	Countersinking Tool



## BACKING ROD

Polyethylene Foam Bead used to enable correct filling of joints with sealant.



Order N°	Description
11177	ø10mm x 50m roll

## FLEXIBLE SEALANT

### • Gyprock™ Wet Area Acrylic Sealant:

For joints in tiles and other substrates. Paintable.

### • SikaflexPro™: For joints in Constructafloor™ substrate and fastener heads.



Order N°	Product
10902	Gyprock™ Wet Area Acrylic Sealant – 450g tube
11378	Sikaflex Pro 310ml tube – Grey
39488	Sikaflex Pro 310ml tube – Black

Prime surfaces as recommended by the manufacturer.

## CONSTRUCTION ADHESIVE

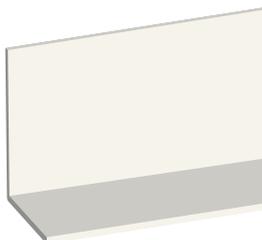
To be used on all framing where Constructafloor™ sheets are nail fixed.



Order N°	Product
39378	Sikaflex® II FC, 310ml tube
Supplied by others	Fuller Max Bond™
Supplied by others	Fuller Max Bond Pro™

## PERIMETER FLASHING

- PVC angle 75 x 50mm. For use at wall/floor junction.



Order N°	Length
11206	3000mm

**NOTE: The following system components are not supplied by CSR.**

## FASTENERS

NOTE: In high corrosion zones, such as the coastal marine environment, Class 4 fasteners must be used.

### • Nails for fixing Constructafloor™ Sheets:

Power driven nails, 50mm D head, Class 3 or 4 finish.

### • Screws for fixing Constructafloor™ Sheets:

For timber framing:

Countersunk head wood screws 10G x 50mm hot dip galvanised steel (class 3) or stainless steel. Pre-drill and countersink heads.



For steel framing

Metal Tek's, 10G x 16TPI x 30mm class 3 or 4, countersunk head screws. Pre-drill and countersink heads.



OR

Wing tip screws, 10G x 40mm Class 3, self-embedding head. For framing with minimum BMT 0.75mm.



## MORTAR BED

- A proprietary impervious barrier assessed and classified in accordance with AAS4858. Refer to separate data sheets from Ardex and Bostik for recommendations. Other suitable products are available from Davco, Crommelin and Parchem.

## INSITU MEMBRANE/INTERNAL TRAY

- A proprietary impervious barrier assessed and classified in accordance with AAS4858. Refer to separate data sheets from Ardex and Bostik for recommendations. Other suitable products are available from Davco, Crommelin and Parchem.

## VINYL ADHESIVE

- Use products that are compatible with fibre cement substrates, such as Holdfast 1906, Dunlop Vinyl Adhesive and Polymer Engineering Vinyl Adhesive.

## TILE ADHESIVE

- Refer to separate data sheets from Ardex and Bostik for recommendations. Other suitable products are available from Dunlop, Parchem and Davco.

## ADHESIVE FULAPRENE 303

- For fixing PVC angle to slab, timber or fibre cement flooring.

## DESIGN CONSIDERATIONS

This guide refers to good practice, though it is not intended as an exhaustive statement of all relevant information. It remains the responsibility of the building designer to verify that Cemintel Constructafloor™ Wet Area flooring is suitable for the particular requirements of any given project.

The systems outlined in this manual are based on Australian Standard AS3740: Waterproofing of wet areas within residential buildings.

This Australian Standard details the design, materials, and installation requirements for wet areas within residential buildings. A wet area is defined by the standard as an area within a building supplied with water from a water supply system, including bathrooms, showers, laundries and toilets, but excluding kitchens, bars and similar. Elements within wet areas may have requirements to be water resistant or waterproof, as set out in the Building Code of Australia.

Waterproof areas are floors within and near showers, and at junctions between floors and walls in showers and bathrooms. A waterproof membrane must be applied in these areas.

### SYSTEM COMPONENTS

Constructafloor™ Wet Area flooring is a fibre cement product and waterproofing and lining components should be chosen that are recommended by their manufacturer for fibre cement substrates. Components including sealers, membranes, mortars, adhesives and finishes should be considered for their compatibility with each other, as well as with the substrate, and their performance as a complete system.

Extensive testing has been carried out by Ardex and Bostik and a number of system recommendations are available. Contact CSR for details or refer to data sheets at [cemintel.com.au](http://cemintel.com.au).

### FRAMING

Cemintel Constructafloor™ Wet Area flooring can be fixed to timber or steel floor joists at maximum 450mm centres. Joists and trimmers must have a minimum face fixing width of 45mm or to floor joist manufacturer's requirements. All perimeters must be supported on framing.

As a minimum requirement, framing shall be in accordance with the following standards:

- AS1684 – Residential timber-framed construction.
- AS/NZS4600 – Cold-formed steel structures.
- AS3623 – Domestic metal framing.

Timber shall be seasoned or have reached an equilibrium moisture content of 16% or less at the time of framing. Unseasoned timber is not recommended.

The design and construction of the steel frames should be considered in conjunction with the advice from the

manufacturer. In highly corrosive environments, appropriate measures should be taken to protect the frame from corrosion. Fixings to steel joists are suitable up to a 2.0mm base metal thickness (BMT), contact CSR Cemintel™ for fixing information where steel BMT is greater than 2.0mm.

### LOADS

Cemintel Constructafloor™ Wet Area flooring has been designed to resist a live load of 2.0kPa and a 1.8kN point load with 450mm spacing of supports.

### TILING

When selecting tiles ensure they are fit for purpose and an appropriate adhesive compatible with a fibre cement substrate is selected. In all cases the tile and tile adhesive manufacturer's instructions should be followed.

For further advice, refer to Australian Standard AS3958.1 'Guide to the installation of ceramic tiles'.

Tile adhesive must conform to Australian Standard AS2358 'Adhesives - for fixing ceramic tiles'. In all cases the tile and tile adhesive manufacturers' instructions should be followed.

## SHEET INSTALLATION

### SHEET LAYOUT

Cemintel Constructafloor™ Wet Area sheets are fixed directly to the floor joists. Sheets are laid with tongue and groove joints perpendicular to the joists. Sheet ends must align with the centre of joists, and may be staggered or aligned. Sheet ends must be aligned at control joints.

All perimeters must be supported on framing. Leave a 10mm gap at wall junctions.

Sheets must be fully supported wherever a tongue or groove profile has been removed or where the profiles do not engage fully.

### CONTROL JOINTS

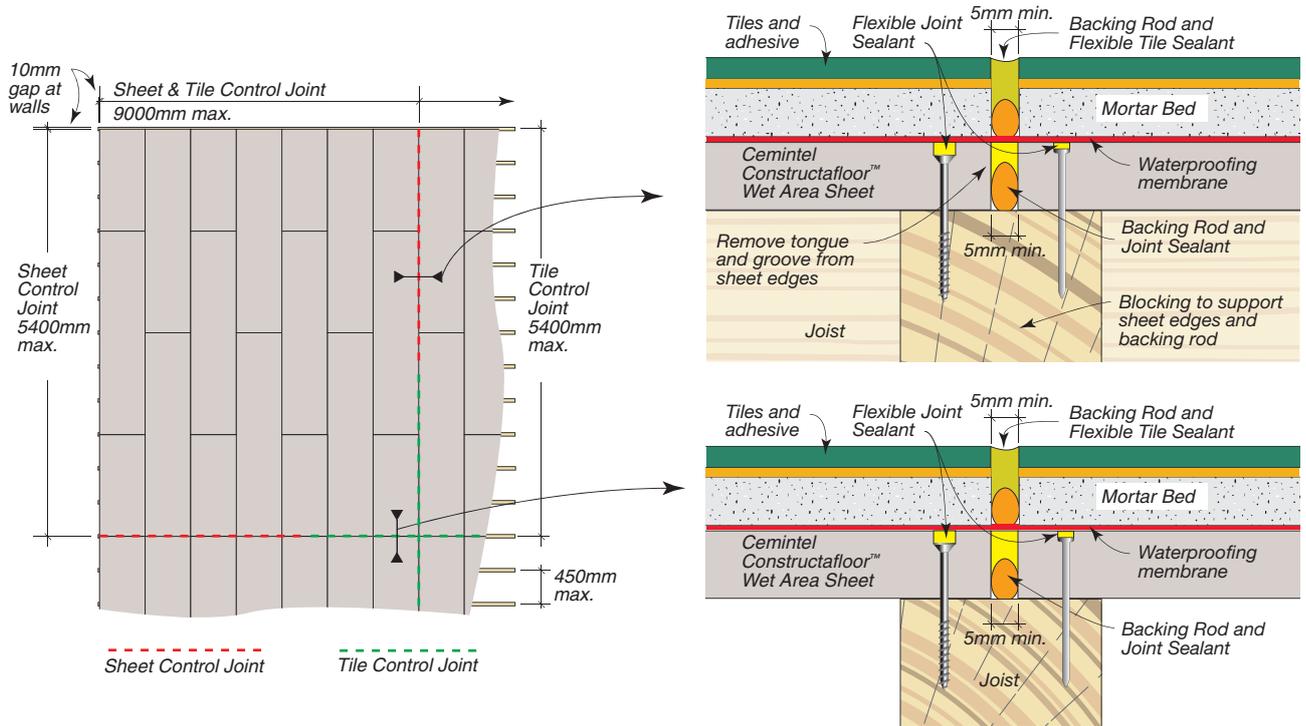
Control joints between Constructafloor™ Wet Area sheets must be provided at 9m centres maximum at tongue and groove edges to allow for differential movement in both the materials and the structure. Where the floor is exposed to direct sunlight, control joints are to be spaced at 6m centres maximum. Refer to FIG 1, 2 and 3.

Control joints between sheets must be provided at butt joints in accordance with FIG 1, 2 or 3. Sheet ends must be aligned at control joints.

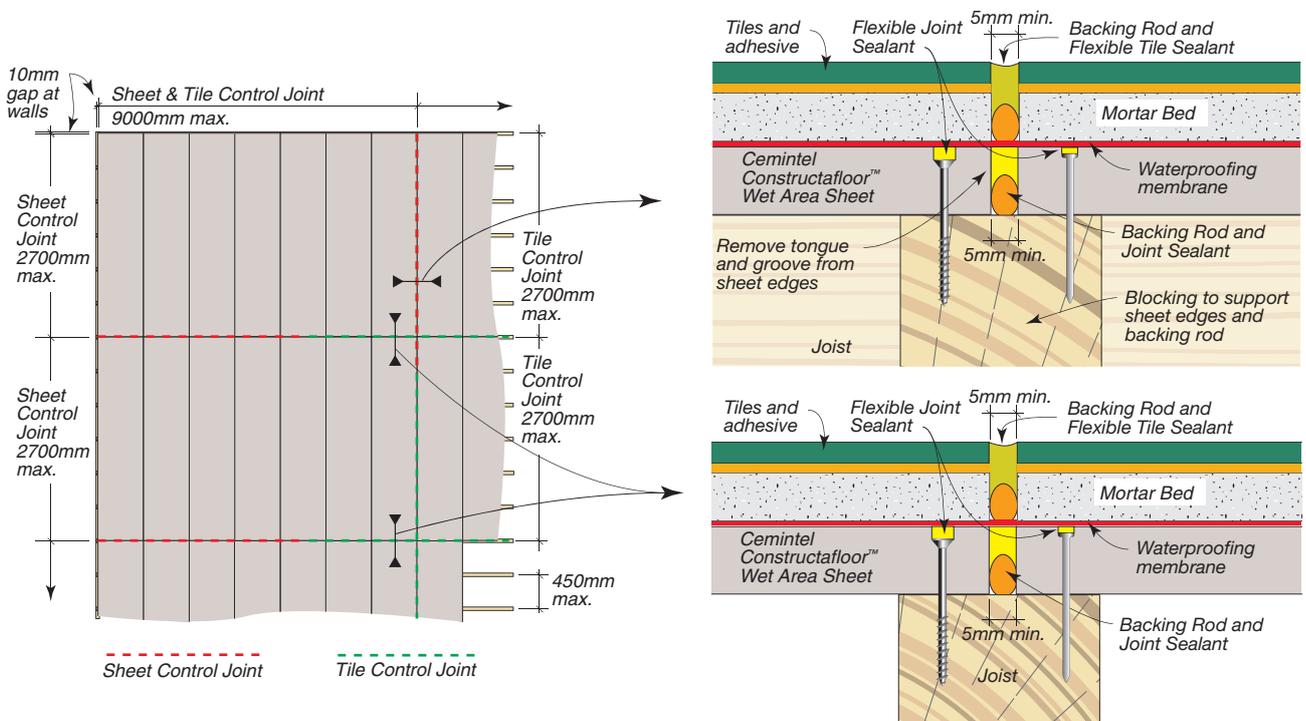
Control joints in sheets must also be provided at changes in direction of sheets, at doorways and at any structural control joints.

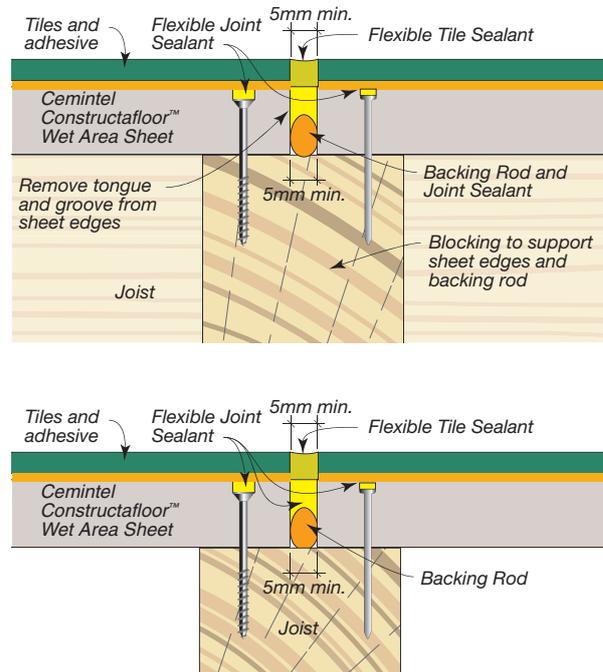
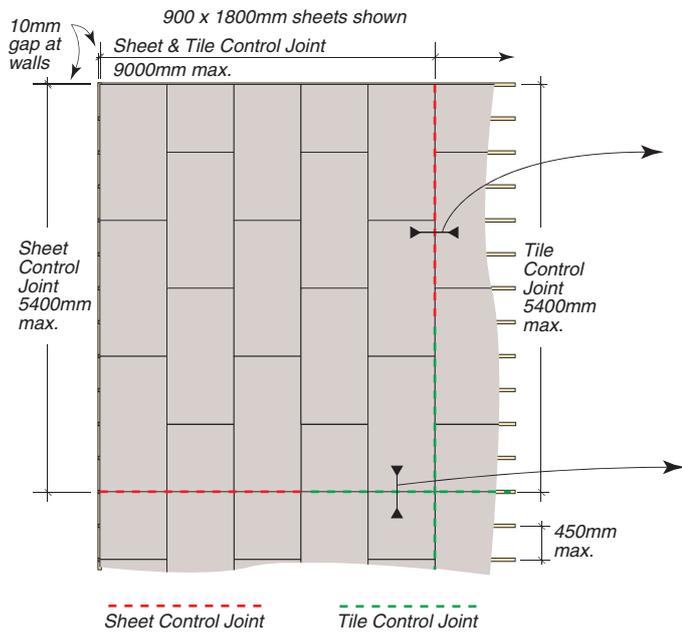
Control joints in the finish layer must be aligned with control joints in the sheets. Refer to installation details.

**FIG 1: Typical Sheet & Control Joint Layout – 600 x 2700mm Sheets Staggered & Mortar Bed System shown**



**FIG 2: Typical Sheet & Control Joint Layout – 600 x 2700mm Sheets Aligned & Mortar Bed System shown**



**FIG 3: Typical Sheet & Control Joint Layout – 900 x 1800mm Sheets Staggered & Direct Fix Tile System shown**

## FIXING SHEETS

### Tiled Areas

Panels are installed with the side printed 'This side down for tiling' facing down. A chamfer at each tongue and groove edge allows for waterproofing sealant.

Tongue and groove joints must be butted tightly together prior to fixing. Refer to detail. Butt joints must be fixed to the frame leaving a 2mm minimum gap between each flooring sheet to allow for joint sealant.

Control Joints must be installed leaving a 5mm minimum gap between sheets to allow for the installation of backing rod and sealant. This gap is important to accommodate movement of the building materials and structure.

Fix sheets with screws at 450mm centres maximum along framing. Alternatively, where sheets are to be nail fixed, apply a continuous bead of construction adhesive to sheet framing and power nail at 200mm centres maximum. Fixings must be kept a minimum of 50mm from corners. Refer to installation details for edge distance requirements.

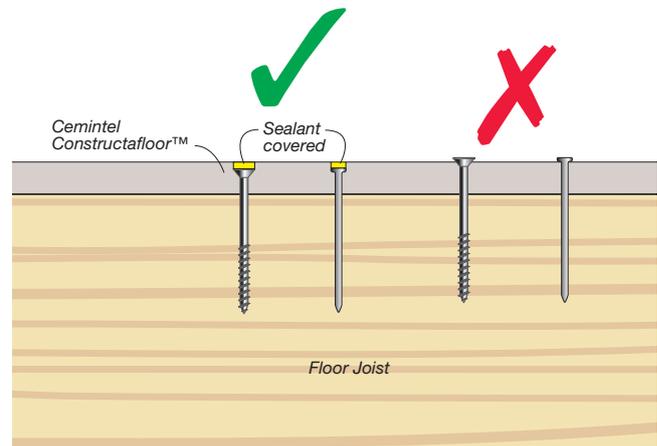
Fixings should finish below the finished level of the Constructafloor™ sheet and any indentation should be filled with flexible sealant.

### Vinyl Finish

Panels are installed with the side printed 'This side down for tiling' facing up. There is no chamfer at tongue and groove edges.

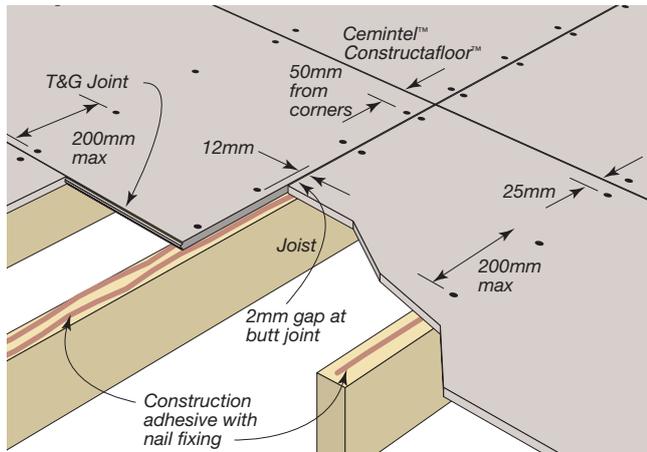
All panel joints are to be butted tightly together prior to fixing. Install control joints as for tiled areas.

Screw or nail fix sheets as for tiled areas. Fixings should finish below the finished level of the Constructafloor™ sheet and any indentation should be filled with epoxy or polyester builder's filler.

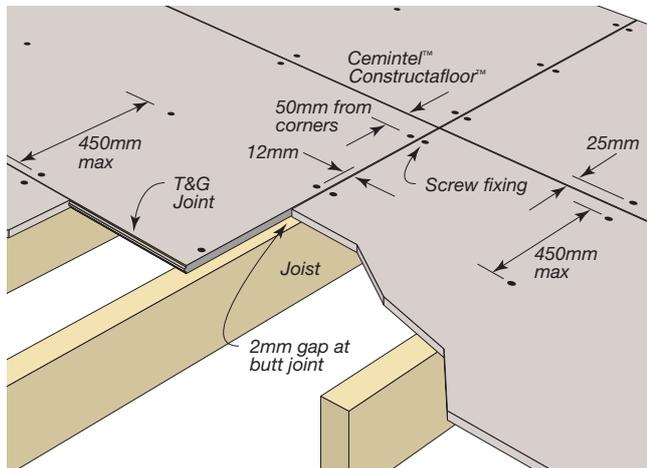
**FIG 4: Fastener Countersinking Detail**

Handy Hint: To prevent sealant spillage, place a strip of adhesive tape over the screw hole prior to drilling, then remove once screw is in place and covered with sealant.

**FIG 5: Constructafloor™ Fixing Detail – Nail Fixing**



**FIG 6: Constructafloor™ Fixing Detail – Screw Fixing**



## SHEET JOINTING

### Tiled Areas

Sheets must be fixed in position ready for joints to be completed. Ensure joints are clean and clear of any dust that may prevent sealant adhering.

Place a strip of masking tape along both sides of the joint to ensure a neat finish is achieved. For Control Joints, press foam backing rod into joint pressing down firmly against joist leaving approximately 6mm gap at top.

Fill tongue and groove, butt and control joints with flexible sealant, finishing flush with the sheet surface. Joints must be smoothed within 10 minutes. Remove masking tape and allow sealant to dry for approximately 24 hours.

### Vinyl Finish

Sealant is not required at tongue and groove or butt joints. Treat control joints as for tiled areas.

Refer to the following details for jointing and fixing information.

## FLOOR FINISHES

### MORTAR BED & TILE

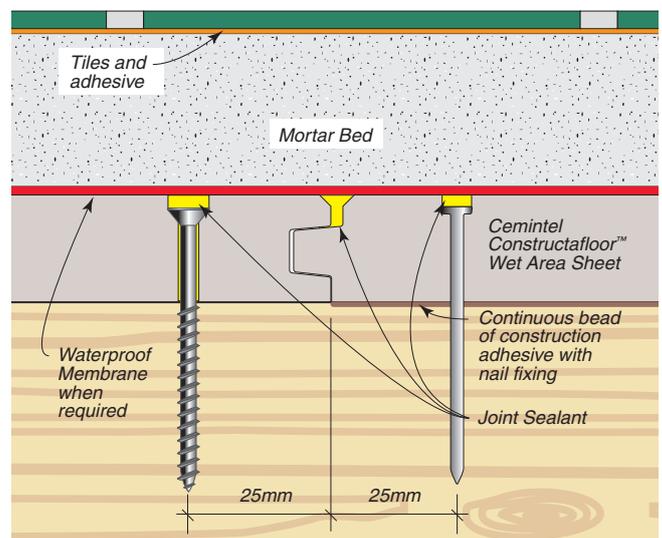
If a fall to waste is required, tiles must be laid on a mortar bed.

Form control joints in the mortar bed/tile layers to correspond with the control joints in sheets.

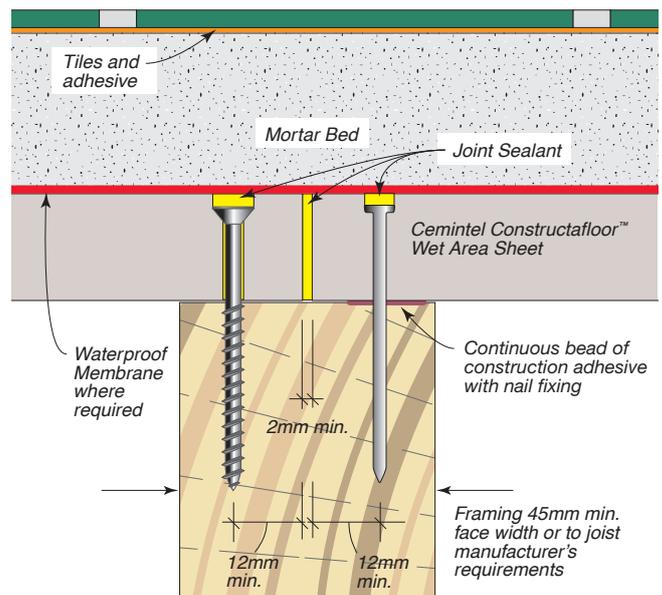
The mortar bed should be allowed to cure for approximately 10 days before tiling commences.

Note: Do not tile over control joints in the mortar bed.

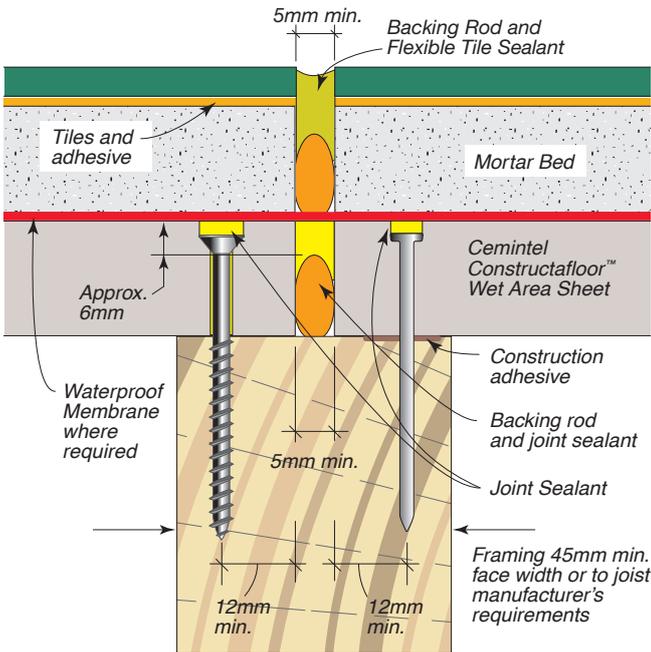
**FIG 7: Typical T&G Joint with Mortar Bed & Tiles**



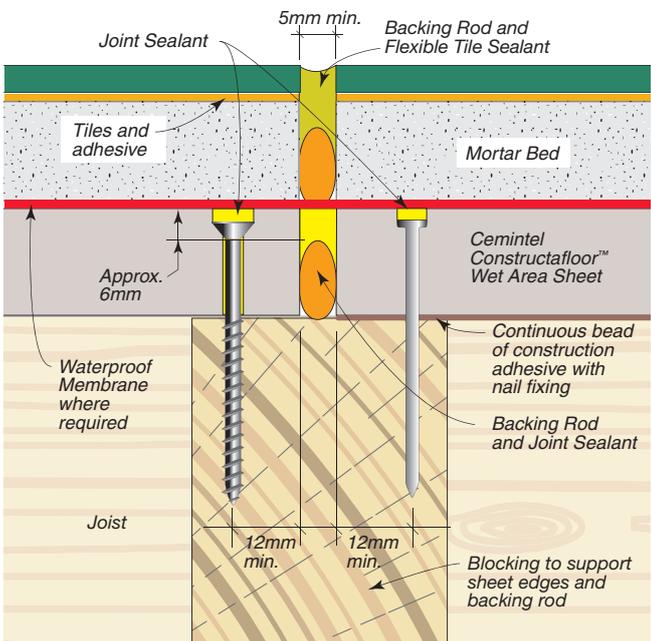
**FIG 8: Typical Butt Joint with Mortar Bed & Tiles**



**FIG 9: Control Joint at Butt Joint with Mortar Bed & Tiles**



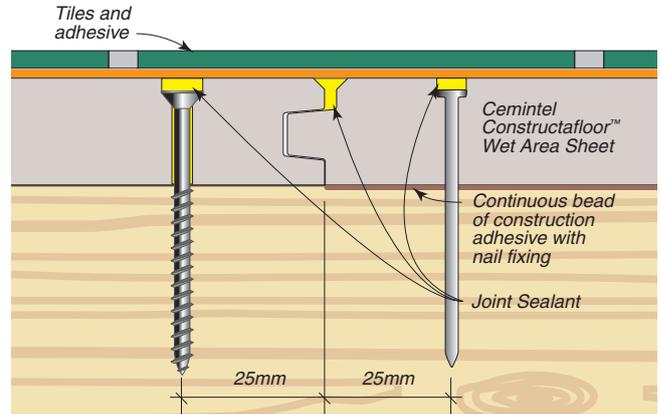
**FIG 10: Control Joint at T&G Joint with Mortar Bed & Tiles**



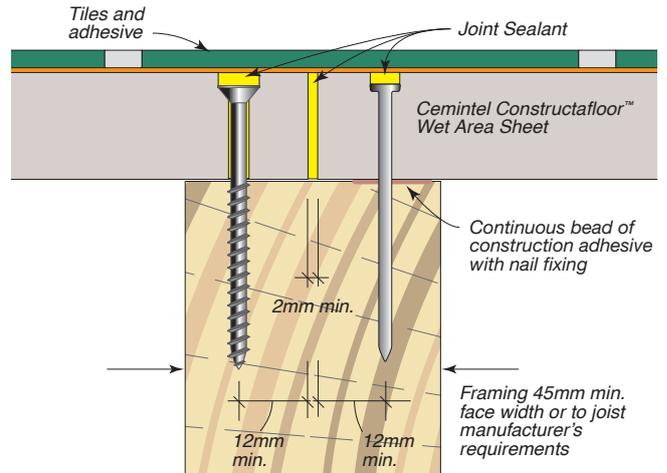
**DIRECT FIX TILES**

If a fall to waste is not required, tiles may be fixed directly to Cemintel Constructafloor™ Wet Area flooring (or over a waterproof membrane).

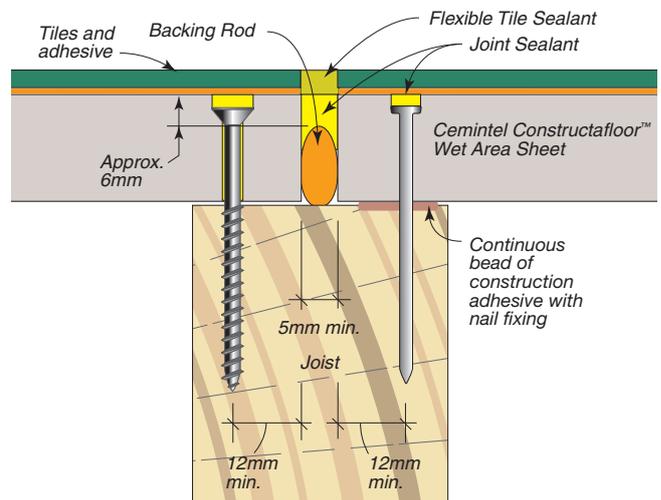
**FIG 11: Typical T&G Joint with Direct Fixed Tiles**



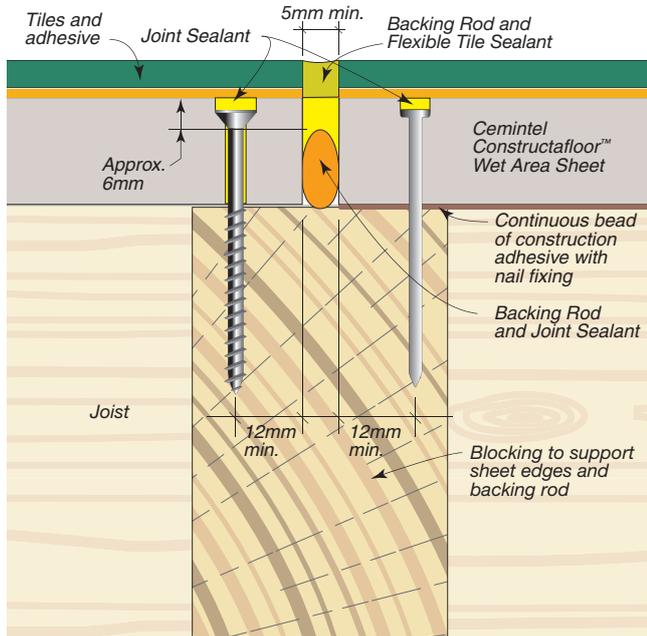
**FIG 12: Typical Butt Joint with Direct Fixed Tiles**



**FIG 13: Control Joint at Butt Joint with Direct Fixed Tiles**



**FIG 14: Control Joint at T&G Joint with Direct Fixed Tiles**

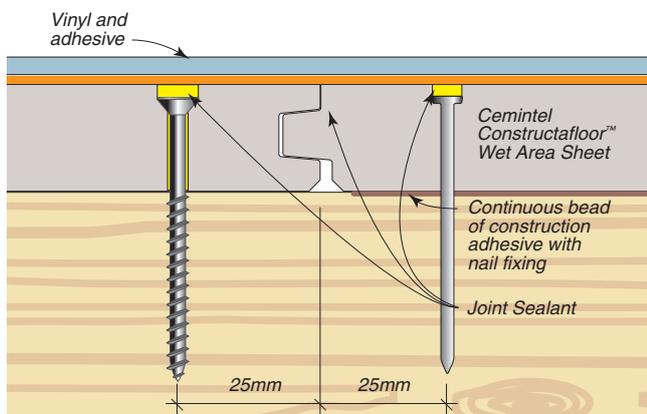


**VINYL**

A flush surface is required to avoid blemishes in the finish. Fill minor imperfections and cover fastener heads with epoxy or polyester based builder’s filler. Any joint misalignments must be filled or sanded smooth. Alternatively, a floor leveller such as Ardite NA may be used over larger areas.

Ensure all panels are clean, dry and free from dust. Follow adhesive manufacturer’s recommendations for installing the vinyl sheeting. It is recommended that a primer be used for polymer type adhesives.

**FIG 15: Typical T&G Joint with Vinyl Finish**



**GENERAL AREA WATERPROOFING**

**PERIMETER FLASHING**

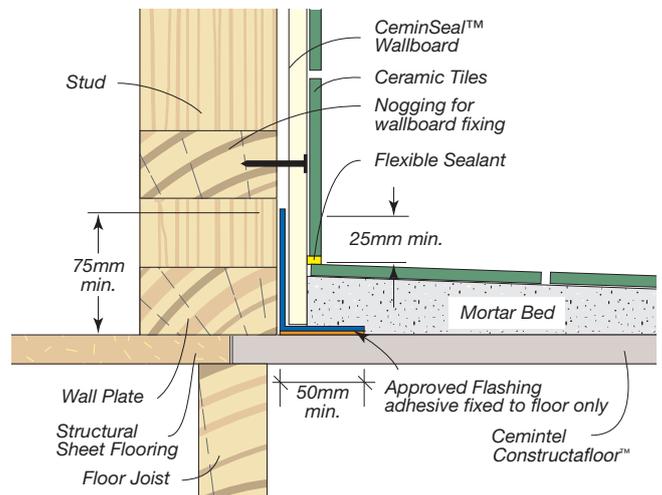
Perimeter flashing must be used at the floor/wall junctions in all general wet areas, and must extend a minimum of 25mm above finished floor level.

Two recommended methods are:

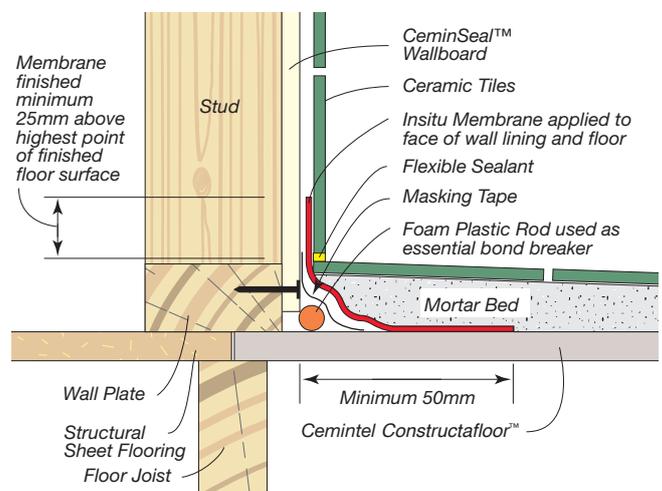
PVC Flashing Angle, 75 x 50mm adhesive fixed to floor only using Fulaprene™ 303 Adhesive.

Insitu membrane, 50mm wide to floor and up wall to 25mm minimum above highest point of finished floor level.

**FIG 16: Perimeter Flashing with PVC Angle**



**FIG 17: Perimeter Flashing with Flashing Strip**



# SHOWER RECESS WATERPROOFING

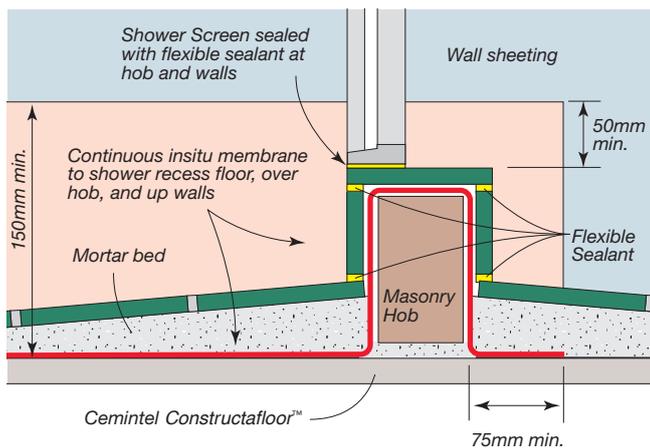
## INSITU APPLIED MEMBRANE

A continuous insitu membrane must be applied to shower recess areas as shown in FIG 18, 19 and 20. Membranes must comply with AS4858 and be recommended for use with a fibre cement substrate. Installation is to be in accordance with the manufacturer's recommendations.

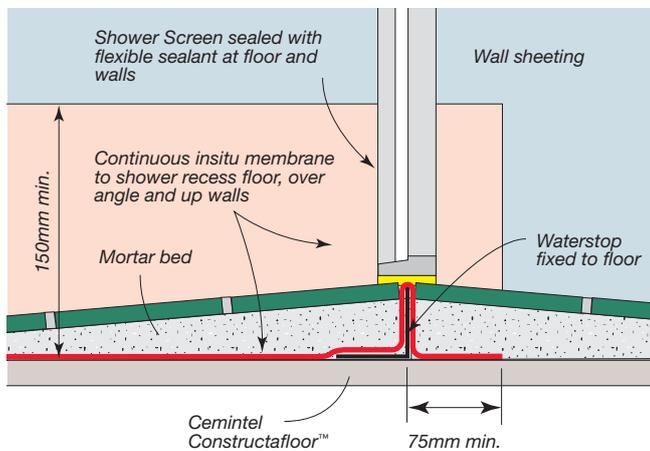
For second storey installations, it is recommended that a continuous insitu membrane be applied to the entire wet area floor and up the walls to a minimum 150mm above the floor sheet level and/or to a minimum 50mm above any shower hob.

NOTE: For further details on waterproofing refer to Australian Standard AS3740.

**FIG 18: Typical Shower Recess with Hob**



**FIG 19: Typical Hobless Shower Recess**

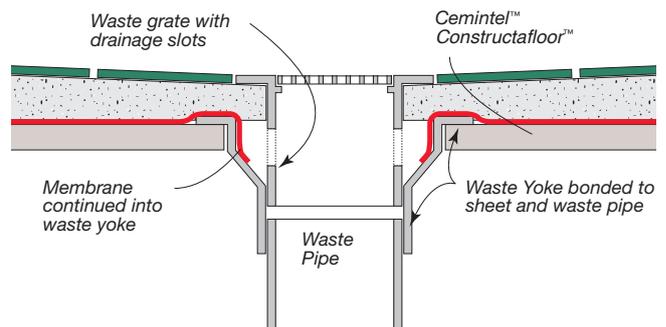


## PLUMBING WASTES

It is important that all plumbing wastes are sealed, particularly in a shower recess. A PVC waste yoke must be bonded to the flooring and the waste pipe before fitting grates and other fixtures.

A waste fitting incorporating a 'leak control system' is recommended to enable any moisture to drain from beneath the floor tiles.

**FIG 20: Typical Waste Detail**



## MAINTENANCE

The durability of the system can be maintained by periodic inspection, including examination of the surface finishes, flashings, penetrations and membranes. Any cracked or damaged flashings or seals that would allow water ingress must be repaired immediately.

## HANDLING & STORAGE

Cemintel Constructafloor™ Sheets must be treated with care. During handling, avoid damage to edges, ends and surfaces. Sheets must be carried on edge.

All sheets must be stacked flat, clear of the ground, and supported at 300mm maximum centres on a level platform.

Material must be kept dry, preferably by being stored inside the building. Sheets exposed to moisture prior to installation may be subject to shrinkage, and voiding of warranty. Protect from contaminants such as silicone spray. Where it is necessary to store panels outside, they must be protected from the weather.

Sheets must be dry prior to fixing, joint sealing and coating.

### SAFETY

When cutting, drilling or grinding Cemintel™ sheets using power tools, always ensure the work area is well ventilated. CSR Cemintel recommends the use of appropriate dust reduction methods. An approved dust mask (AS1715 and AS1716) and safety glasses (AS1337) must be worn. CSR recommends that hearing protection be worn.



## SHEET PREPARATION

Cement based levelling products may be used.

Sheets should not be sanded.

### CUTTING

#### Power Saw

Sheets should be cut from the back using a power saw. CSR recommends using the FESTO TS 55 EBQ Plunge Cut Saw, diamond tipped blade and appropriate dust reduction methods.



Order N°	Product
107231	FESTO TS 55 EBQ Plunge Cut Saw with 1400mm Guide Rail
107224	FESTO Diamond Tipped Blade for TS55 (for cutting Edge™ Cladding, fibre cement sheet, etc.)

### PENETRATIONS

Penetrations in sheets may be cut or drilled prior to installation. Cut from the back or drill from the front. Cut penetrations oversize by 8 –10mm all around. Seal penetrations in accordance with recommended products.



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RESIDENTIAL INTERNAL WET AREA FLOORING SYSTEM



FC:533

## HEALTH & SAFETY

### WARNING

Fibre Cement products contain crystalline silica. Repeated inhalation of fibre cement dust may cause lung scarring (silicosis) or cancer. Do not breathe the dust. When cutting sheets, use the methods recommended in this brochure to minimise dust generation. If power tools are used, wear an approved dust mask (respirator). These precautions are not necessary when stacking, unloading or handling fibre cement products.

For further information and for a Material Safety Data Sheet, phone 1800 678 068.

### WARRANTY

CSR Building Products Limited ("CSR") warrants its Cemintel Constructafloor<sup>™</sup> ("Product") to remain free of defects in material and manufacture for 10 years.

In the event of any failure of the Product caused by the direct result of a defect in the material or manufacture of the Product, CSR will at its option replace or repair, supply an equivalent product, or pay for doing one of these.

This warranty does not apply where the Product has been used in any manner not in accordance with the manufacturer's instructions, nor the reuse of the Product after its initial installation. This includes installation and maintenance in accordance with the relevant Cemintel technical manual, current copies are available at [cemintel.com.au/installation](http://cemintel.com.au/installation) or by contacting 1300 CEMINTEL. CSR recommends that only those products, components and systems recommended by it be used and the project must be designed and constructed in strict compliance with all relevant provisions of the current Building Code of Australia, regulations and standards. All other products, including coating systems, applied to or used in conjunction with the Product must be applied or installed and maintained in accordance with the relevant manufacturer's instructions and good trade practice. CSR will need to be satisfied that any defect in its Product is attributable to material or manufacture defect (and not another cause) before this warranty applies.

Without limiting the foregoing, CSR will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect

design of the structure, high levels of pollution, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to the Product or normal wear and tear.

Other than as expressly set out in this warranty, and the guarantees that can not be excluded under The Australian Consumer Law (Schedule 2 of the Competition and Consumer Act 2010 (Cth)) (and any other law), CSR excludes all other warranties and guarantees with regard to the Product including all guarantees and warranties that may apply at law.

To the extent that it is able to do so, CSR excludes all liability for loss and damage (including consequential loss) in connection with the Product. This exclusion does not apply where the Product is sold to a consumer and is a good of a kind ordinarily acquired for personal, domestic or household use or consumption.

The following statement is provided where the Product is supplied to a buyer who is a "consumer" under the Australian Consumer 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. The benefits of this warranty are in addition to other rights or remedies of the consumer under law in relation to the goods or services to which the warranty relates.

Notification of a warranty claim must be made to CSR prior to any return of the Product. Failure to allow CSR to examine an alleged faulty Product in-situ may result in the voiding of this warranty.

To make a claim under this warranty, you must contact CSR on 1300 CEMINTEL, or write to one of our state offices, [cemintel.com.au/contact-us](http://cemintel.com.au/contact-us). All expense of claiming the warranty will be borne by the person making the claim. CSR may require documentation supporting the claim to be provided.

Cemintel<sup>™</sup>, Constructafloor<sup>™</sup> and CSR<sup>™</sup> are trademarks of CSR Limited.  
FC533.BMS1095.0315

CONTACT DETAILS

MARCH 2015

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Coopers Plains QLD 4108

**Victoria**  
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Yarraville VIC 3013

**South Australia**  
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Mawson Lakes SA 5095

**Western Australia**  
19 Sheffield Road,  
Welshpool WA 6106

**Tasmania**  
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Derwent Park, TAS 7009

**Northern Territory**  
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Berrimah NT 0828