

# CSR Fibre Cement Wet Area Systems.

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## **WET AREA FLOORING SYSTEM.**

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# Wet Area Lining Systems.

## **DESCRIPTION.**

CSR Fibre Cement Wallboard is an autoclaved, cellulose fibre reinforced cement sheet which is immune to permanent water damage and will not rot.

It is specifically designed for use in the lining of walls in kitchens, bathrooms, laundries, toilets and other areas commonly known as 'wet areas' in domestic buildings.

CSR Fibre Cement Wallboard has a recess on both long edges so that sheets may be taped and set with CSR Gyprock®/Fibre Cement jointing materials. Once jointed, it may be tiled, painted or wallpapered as desired.

An appraisal by the Building Research Association of New Zealand (BRANZ Appraisal Certificate N°97/007), confirms the suitability of the CSR Fibre Cement Wet Area Lining Systems (excluding the Compressed Sheet Wet Area Flooring System) detailed in this technical literature.

# Advantages.

- Simple and quick to install.
- Low installed cost.
- Immune to permanent water damage.
- Covered by the CSR Internal Lining Guarantee.
- Smooth sanded surface ready for finishing.
- Maintenance free.
- A suitable substrate for all forms of decorative finishing.

# Applications.

Australian Standard AS3740 : 1994 'Waterproofing of wet areas within residential buildings' defines wet areas in two categories.

Category 1 wet areas; are those wall and floor areas enclosing a shower compartment, i.e. part wall areas of showers within bathrooms and ensuites.

Category 2 wet areas; are those part walls adjacent to fixed vessels such as baths, toilets and tubs, i.e. part wall areas within bathrooms, ensuites, laundries and kitchens other than the wall area enclosing a shower.

The CSR Fibre Cement Wet Area Lining Systems offer proven, reliable and cost effective solutions to both categories.

## **CATEGORY 1. SHOWER RECESS AREAS.**

CSR Fibre Cement Wallboard is used in Category 1 areas as a substrate for ceramic tiles, and must be fastened with nails or screws only.

Wallboard sheets are then jointed with CSR Gyprock®/Fibre Cement Wet Area Base Coat and tape.

## **CATEGORY 2. GENERAL WET AREAS.**

CSR Fibre Cement Wallboard is installed into these areas in a similar manner to that used for fixing standard Gyprock® plasterboard.

Wallboard sheets to be used as a substrate for tiling must be fixed with nails or screws only.

# Material Properties.

CSR Fibre Cement Compressed Sheet conforms to the requirements of AS2908.2 : 1992 'Cellulose-cement products Part 2: Flat sheets'.

## MANUFACTURING TOLERANCES.

Mass 6mm thickness (nominal)	9kg/m <sup>2</sup>
Mass 9mm thickness (nominal)	13.5kg/m <sup>2</sup>
Mass 12mm thickness (nominal)	18.3kg/m <sup>2</sup>
Length	+0 to -4mm
Width	+0 to -3mm
Thickness	+0.5 to -0mm
Diagonals Difference (max)	3mm

## FIRE RESISTANCE.

Under the Building Code of Australia, C1.1 Clause 2.5(e), CSR Fibre Cement is deemed to be non-combustible.

The Fire Hazard Properties, when tested in accordance with AS1530.3 are as follows:

## FIRE HAZARD INDICES.

Ignitability	0
Spread of Flame	0
Heat Evolved	0
Smoke Developed	0

# Components.

## CSR FIBRE CEMENT WALLBOARD.

CSR Fibre Cement Wallboard is manufactured in the following sizes, with the two long edges recessed to allow seamless jointing.

Length mm.	Thickness (6mm RE = ✓) (9mm RE = ■) (12mm RE = ☼)		
	Width mm.		
	900	1200	1350
1800		✓	
2400	✓	✓ ■ ☼	✓
2700		✓ ■ ☼	
3000	✓	✓ ■ ☼	✓
3600	✓	✓	✓
4200		✓	

## FASTENERS.

To guarantee performance, only approved fasteners should be used in these systems.

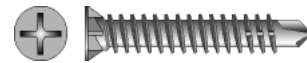
**CSR Fibre Cement Wallboard Nails:** Hot-dip galvanised for softwood and hardwood framing.

- For 6mm sheet – 2.8mm x 30mm.
- For 9mm sheet – 2.8mm x 40mm.
- For 12mm sheet – 2.8mm x 40mm.



## Screws for fixing CSR Fibre Cement Wallboard to Steel Framing

- Buildex FibreTEKS™, Class 3 finish, 9-18 x 30mm.



- Buildex FibreTEKS™, Class 3 finish, 9-18 x 20mm.



## STUD ADHESIVE (FOR NON TILED AREAS ONLY).

- Gyprock® Acrylic Stud Adhesive.

## JOINTING MATERIALS.

- CSR Gyprock®/Fibre Cement Wet Area Base Coat.
- Gyprock® Paper Joint Reinforcing Tape.
- Gyprock Easytape™.
- Gyprock® finishing compounds (non tiled areas only).

## VERTICAL CORNER FLASHING.

- **External Vertical Flashing Angle:** CSR Fibre Cement PVC angle 50 x 50mm. For use with external and preformed shower trays.
- **Internal Vertical Flashing:** A liquid applied membrane such as ABA Superflex™ I, with a bond breaker (supplied by others). For use with internal shower trays.

## PERIMETER FLASHING.

- **Perimeter Flashing Angle:** CSR Fibre Cement PVC angle 75 x 50mm.
- **Perimeter Flashing for Step-Down Slab:** Such as Hypalon™ Flashing Strip 130mm width (supplied by others).
- **Proprietary Insitu Membranes:** Such as ABA Superflex™ I with bond breaker.

## FLEXIBLE SEALANT.

- Dow Corning Brick & Concrete Crack Sealant.
- Selleys™ Brick & Concrete Sealant.

NOTE: Only use sealants suitable for cement and concrete substrates.



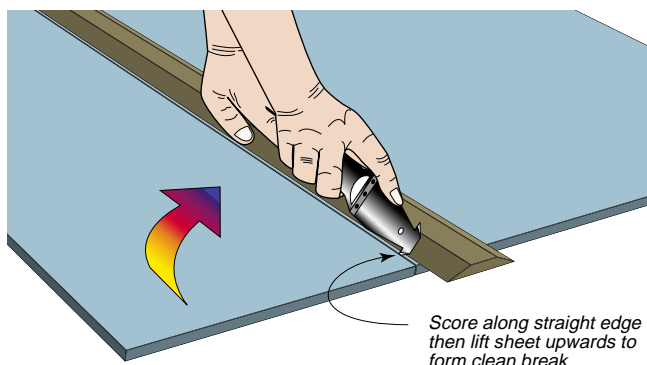
# Sheet Preparation.

## CUTTING.

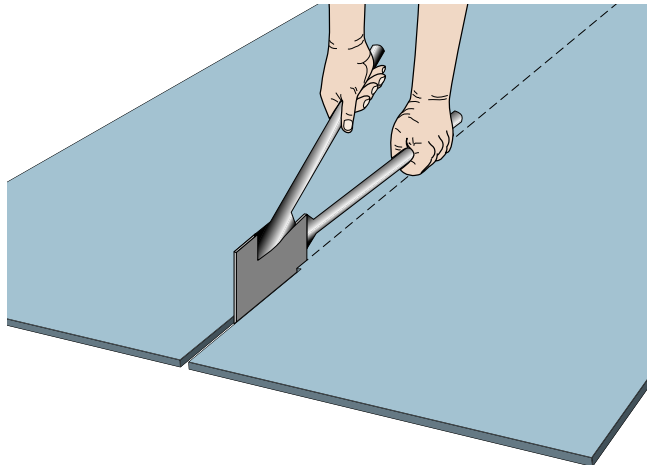
CSR Fibre Cement Sheets may be cut on-site using any of the following methods.

### Tungsten Tipped Score and Snap Knife.

1. Score face of sheet 4 to 5 times using a tungsten tipped knife against a straight edge.
2. Support the scored edge with the straight edge and snap the sheet upwards for a clean break.

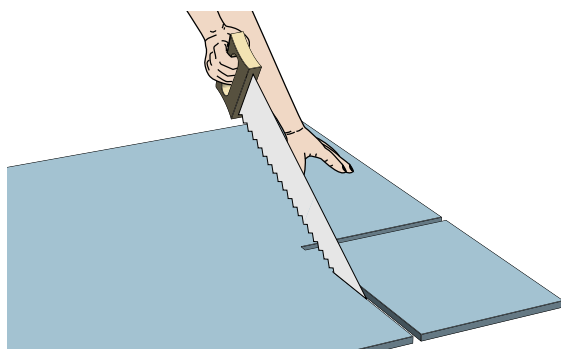


### Hand Guillotine.



### Hand Saw.

Preferably use an old handsaw. A quick jabbing action is best. Work with sheet face up to prevent burrs forming on the face.



## Power Saw.

When it is necessary to use power tools for cutting CSR Fibre Cement Sheets, CSR recommends using the Hitachi Fibre Cement Power Saw Blade. This blade is specifically designed for use with fibre cement and produces a superior cut compared to conventional blades.

It is ideal for use with the Hitachi C7YA dustless circular saw and other 185mm circular saws fitted with vacuum extraction systems.



## ON-SITE RECESSING.

Where it is necessary to produce a ground recess, on-site, a dustless angle grinder should be used. CSR recommends using the Hitachi Easy Bevel with vacuum extraction system, which fits most 125mm grinders, and produces a superior finish.

The recess should not exceed 1.5mm at its deepest point, and should be approximately 35mm wide.

Where edges have been site recessed, ensure the recesses are primed prior to the application of the texture coating. Always follow the texture coating manufacturer's recommendations.

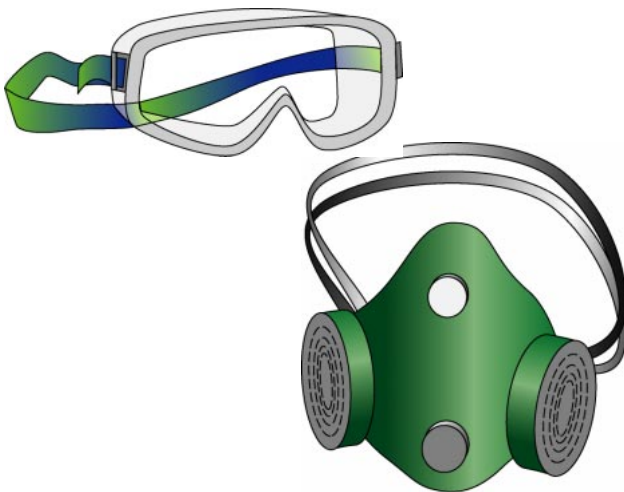


# Handling and Storage.

All CSR Fibre Cement sheeting must be stacked flat, off the ground, and supported on a level platform. Care must be taken to avoid damage to edges, ends and surfaces. Material must be kept dry, preferably by being stored inside the building. Where it is necessary to store sheets outside, they must be protected from the weather. Sheets must be dry prior to fixing, jointing and finishing.

# Safety.

When cutting or grinding fibre cement sheets using power tools, always ensure the work area is well ventilated. An approved dust mask (AS1715 and AS1716) and safety glasses (AS1337) must be worn. CSR recommends that hearing protection be worn where appropriate.



# Control Joints.

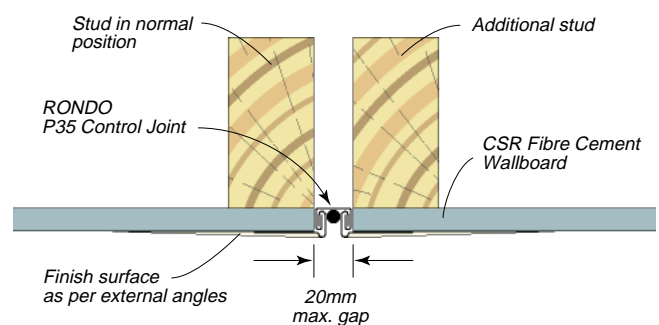
Control joints are to be installed in large spans of wall to allow for structural movement, and are to be positioned:

1. In non tiled areas at not more than 7.2m spacings.
2. In tiled areas at not more than 4.2m spacings.

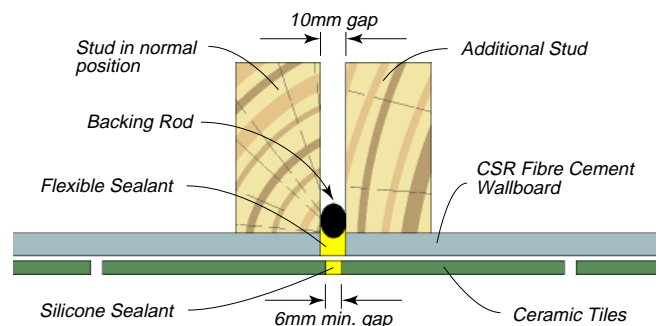
Control joints are to be constructed with a double stud, and allowance for expansion/contraction is to be made in both the wallboard and tiles.

The following methods are recommended.

**FIG 1.**  
**CONTROL JOINT FOR NON TILED AREAS.**



**FIG 2.**  
**CONTROL JOINT FOR TILED AREAS.**



# Framing.

CSR Fibre Cement Wallboard may be fixed to either timber or steel framing.

Timber framing must comply with AS1684 : 1992 'National Timber Framing Code'.

Steel framing must comply with AS3623 : 1993 'Domestic Metal Framing'.

Studs shall be plumb and true, and spaced at maximum 600mm centres. Noggings are to be placed between all studs at 1350mm maximum vertical centres.

When an external shower tray or perimeter angle flashing is used, it is not permitted to fix the wallboard sheet to the bottom plate. An additional row of noggings must be placed 25mm above the tray or flashing to allow the wallboard to be fastened.

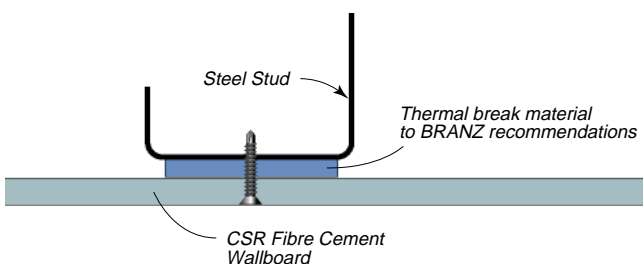
Similarly, noggings are to be placed 25mm above a preformed shower base, sink or bath tub. Also provide suitable noggings to support the bath and other fixtures such as soap holders and towel rails.

Wall framing may be checked-out to a maximum depth of 20mm to accommodate the bath or shower base flange. Alternatively, provide furring to ensure the face of the CSR Fibre Cement Wallboard will finish in front of the upturn on the receptacle.

## EXTREME CLIMATIC CONDITIONS.

When CSR Fibre Cement Wallboard is fixed to steel framing in extreme climates, insulating materials are required between the wallboard and the frame to isolate components subject to thermal movement.

FIG 3. THERMAL BRIDGING ON STEEL FRAMING.



# Wallboard Installation.

Generally, it is recommended that all Wallboard sheets be applied horizontally. This is to reduce the extent of joint visibility in glancing light conditions. Sheets may be fixed vertically in tiled areas or where joint visibility is not an issue.

Butt joints must be staggered a minimum of 600mm in adjacent sheets.

Avoid butt joints over doorways and windows. Where these are unavoidable, they are to be positioned a minimum 200mm from jamb studs, and formed on a stud.

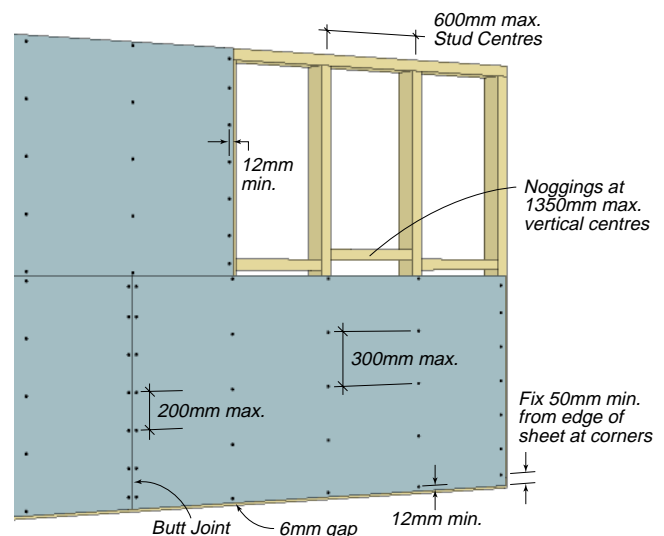
Install the bottom sheet first, with the lower edge a minimum 6mm clear of the finished floor.

Fasteners are to be positioned a minimum of 12mm from the edge of the sheet and a minimum 50mm from sheet corners. Fasteners are to be left a maximum of 0.5mm below the sheet surface.

## NON TILED AREAS.

For non tiled areas, position fasteners at 300mm maximum centres in the body of the sheet, and at 200mm centres at internal angles, external angles and butt joints.

FIG 4. WALLBOARD INSTALLATION. FASTENER METHOD NON TILED AREAS.



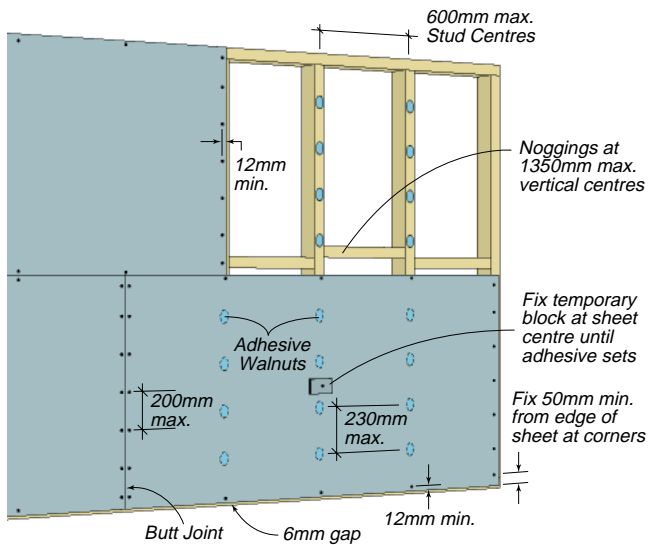
Alternatively the adhesive/fastener system may be used.

Apply 25mm x 15mm 'walnuts' of CSR Gyprock® Stud Adhesive at 230mm maximum centres to intermediate studs.

Hold sheet against studs for 24 hours by fasteners driven through temporary fibre cement blocks in the centre of sheet at every second stud. Fasteners are to be applied at sheet edges as shown in the diagram.

Note: 'Walnuts' of adhesive must NEVER coincide with fastening points.

**FIG 5. WALLBOARD INSTALLATION.  
ADHESIVE/FASTENER METHOD  
NON TILED AREAS.**



## TILED AREAS.

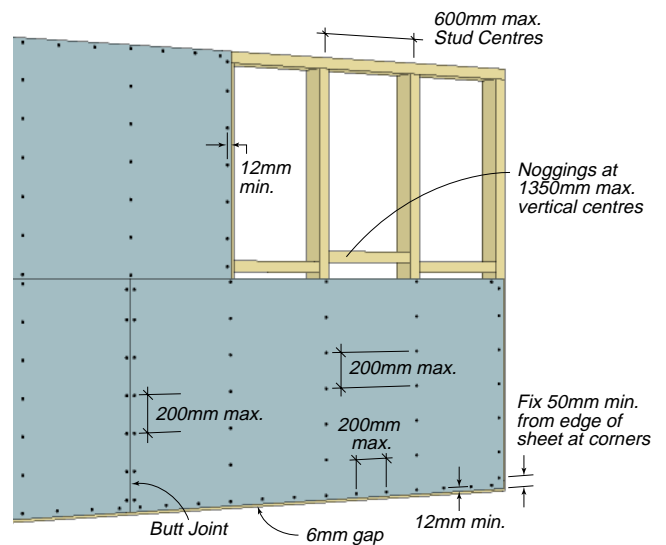
Position fasteners at 200mm centres maximum at sheet edges and ends, internal and external angles as well as in the body of the sheet.

CSR Fibre Cement Wallboard, to be used as a substrate for tiling, must be fixed to the framing with nails or screws.

Use of stud adhesive is NOT acceptable.

These fixing details are suitable for wall tiles up to 20kg/m<sup>2</sup> in weight. For wall tiles up to 32kg/m<sup>2</sup>, sheets must be fixed at 100mm maximum centres to all studs.

**FIG 6. WALLBOARD INSTALLATION.  
FASTENER METHOD  
TILED AREAS.**



# General Wet Area Flashing.

Note: For additional floor detail, refer to Compressed Sheet Flooring Systems section on Page 20 in this guide.

## FLASHING OF GENERAL WET AREAS.

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.

A number of methods can be used:

**Perimeter Angle Flashing:** PVC flashing, 75 x 50mm, adhered to floor only to allow for frame movement. Refer to FIG 7.

**Perimeter Flashing for Step-Down Concrete Slab:** For example Hypalon™ Flashing Strip 130mm width. Refer to FIG 8.

Nail flashing to the bottom plate at a minimum 25mm above bottom of wall plate. Ensure flashing extends down to cover slab recess. Leave a 6mm gap between the wallboard sheet and the mortar bed and fill with flexible sealant.

**Perimeter Insitu Membrane:** For example ABA Superflex I, applied with bond breaker. Where appropriate and/or where required by building regulations, the membrane is to extend across the entire floor and into the waste. Refer to FIG 9.

FIG 8. PERIMETER FLASHING.  
FOR STEP-DOWN SLAB IN GENERAL WET AREA.

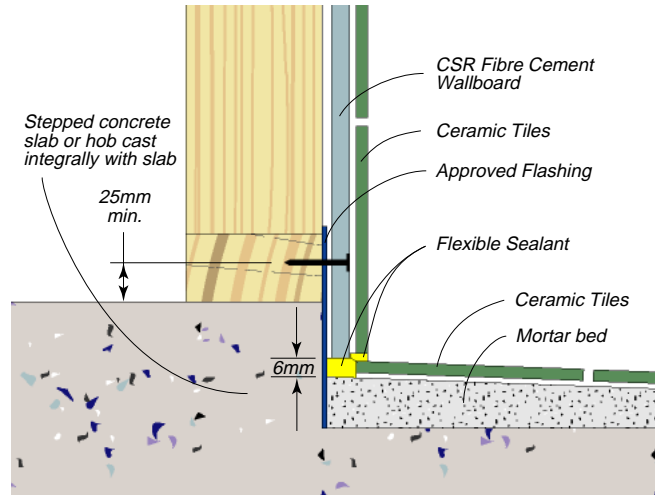


FIG 7. PERIMETER FLASHING.  
PVC ANGLE IN GENERAL WET AREA.

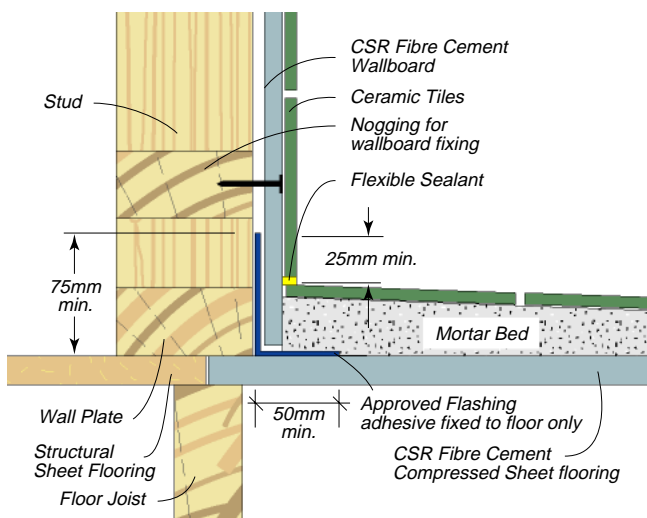
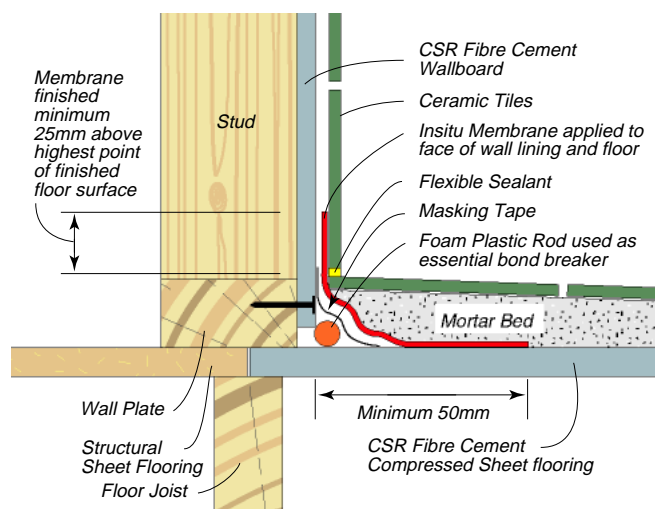


FIG 9. PERIMETER FLASHING.  
INSITU MEMBRANE IN GENERAL WET AREA.





# Shower Recess Construction.

## PREFORMED SHOWER BASE.

A preformed shower base has the advantage of being easy to install over floors of timber, compressed fibre cement sheet and concrete slabs, as well as ensuring that the wall linings are kept clear of any free water likely to accumulate on the shower floor.

A preformed shower base must be installed before the wall linings.

Cut and install PVC angle to internal corner, fixing the angle to studs at 600mm centres. Carry angle down over the shower base lip, stopping 6mm above shower base. PVC angle is to extend a minimum height of 1800mm from the finished floor surface.

Cut and fix the CSR Fibre Cement Wallboard, leaving a 6mm gap between the bottom edge of the sheet and the shower base, between the sheet and the floor, and between sheets forming internal corner.

Neatly cut holes for plumbing penetrations.

Caulk around plumbing penetrations, the gap between the CSR Fibre Cement Wallboard and the shower base, and up internal corner of shower with flexible sealant.

NOTE: Australian Standard AS3740 states that –  
The height of the sides of a shower tray above the highest point of the finished floor surface shall be the greater of –

- i) 75mm; or
- ii) 25mm above the maximum possible water level in the shower compartment.

FIG 10. TYPICAL DETAIL FOR PREFORMED SHOWER BASE.

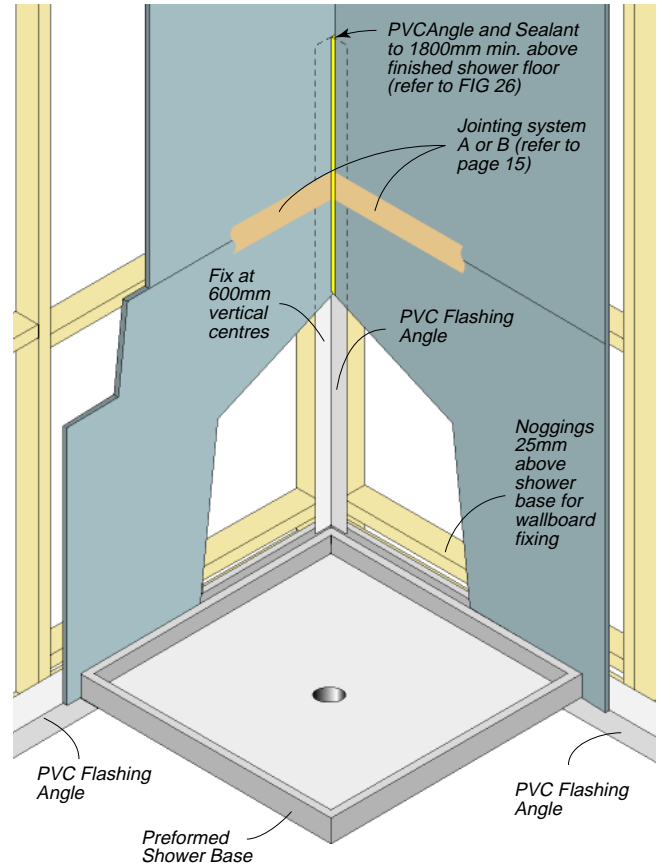


FIG 11. PREFORMED SHOWER BASE ON SHEET FLOORING.

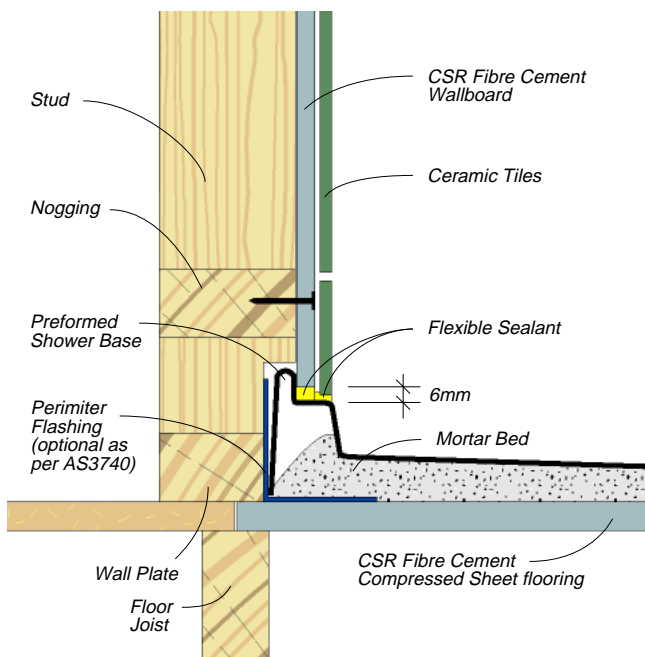
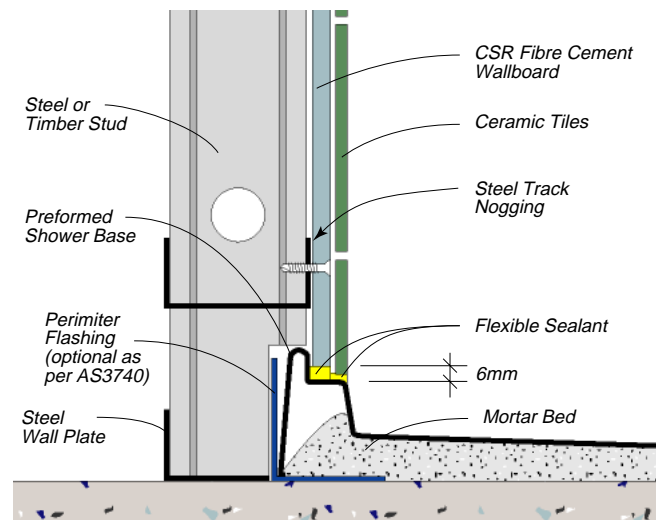


FIG 12. PREFORMED SHOWER BASE ON CONCRETE FLOOR.



**EXTERNAL SHOWER TRAY.**

Install the shower tray, as per the regulations, prior to the installation of CSR Fibre Cement Wallboard.

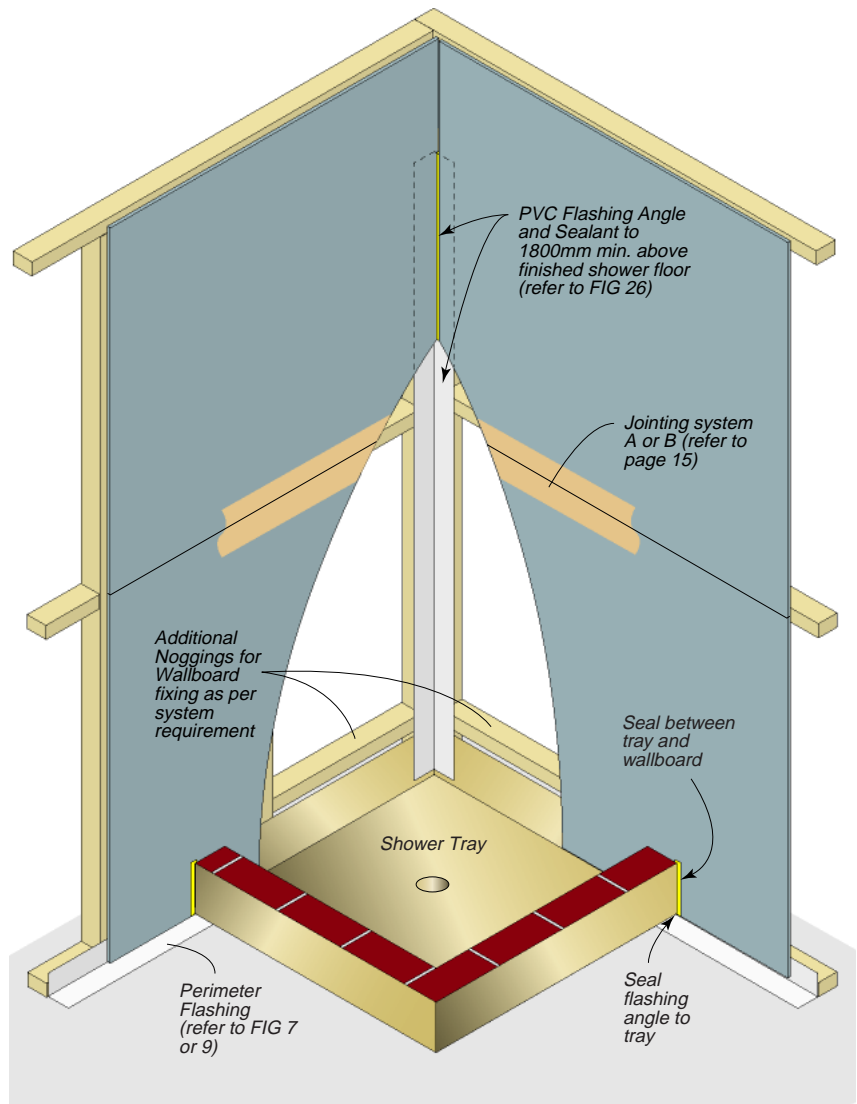
Cut and install PVC angle to internal corner, fixing the angle to studs at 600mm centres. Carry angle down inside the shower tray, stopping as detailed in FIG 13 or 26. PVC angle is to extend a minimum height of 1800mm from the finished floor surface.

Cut and fix the CSR Fibre Cement Wallboard, leaving a 6mm gap between the sheet and the floor, and between sheets forming the internal corner.

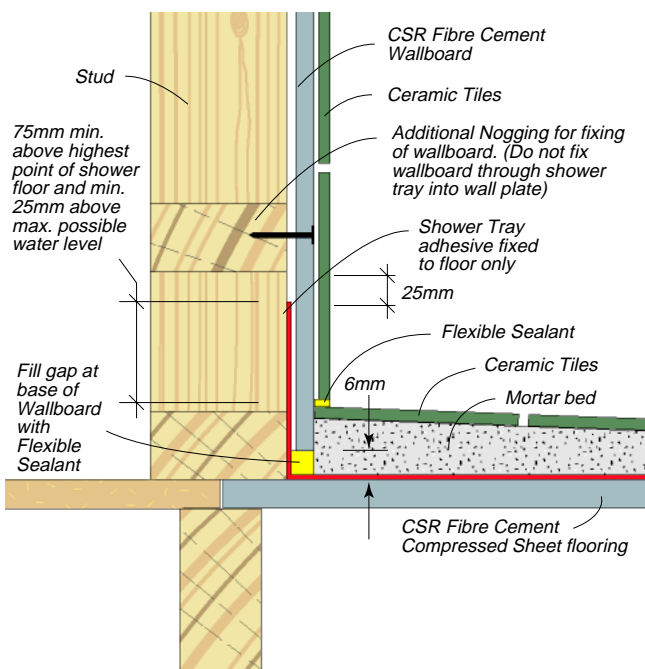
Neatly cut holes for plumbing penetrations.

Caulk around plumbing penetrations, the gap between the CSR Fibre Cement Wallboard and the shower tray (or mortar bed), and up the internal corner of shower recess with flexible sealant.

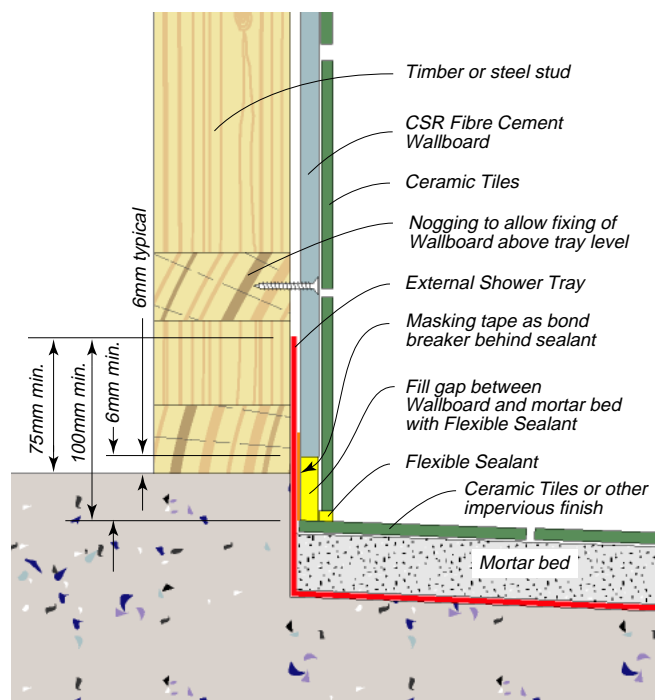
**FIG 13. TYPICAL DETAIL FOR EXTERNAL SHOWER TRAY.**



**FIG 14. EXTERNAL TRAY SHOWER RECESS FOR SHEET FLOORING.**



**FIG 15. EXTERNAL TRAY SHOWER RECESS FOR SET-DOWN CONCRETE SLAB.**



**INSITU-FORMED INTERNAL SHOWER TRAY.**

Install flashing angle to wall/floor junction. Cut and fix the CSR Fibre Cement Wallboard, leaving a 6mm gap between the sheet and the floor, and between sheets forming internal corner.

Neatly cut holes for plumbing penetrations.

Caulk around plumbing penetrations and up internal corner of shower with flexible sealant.

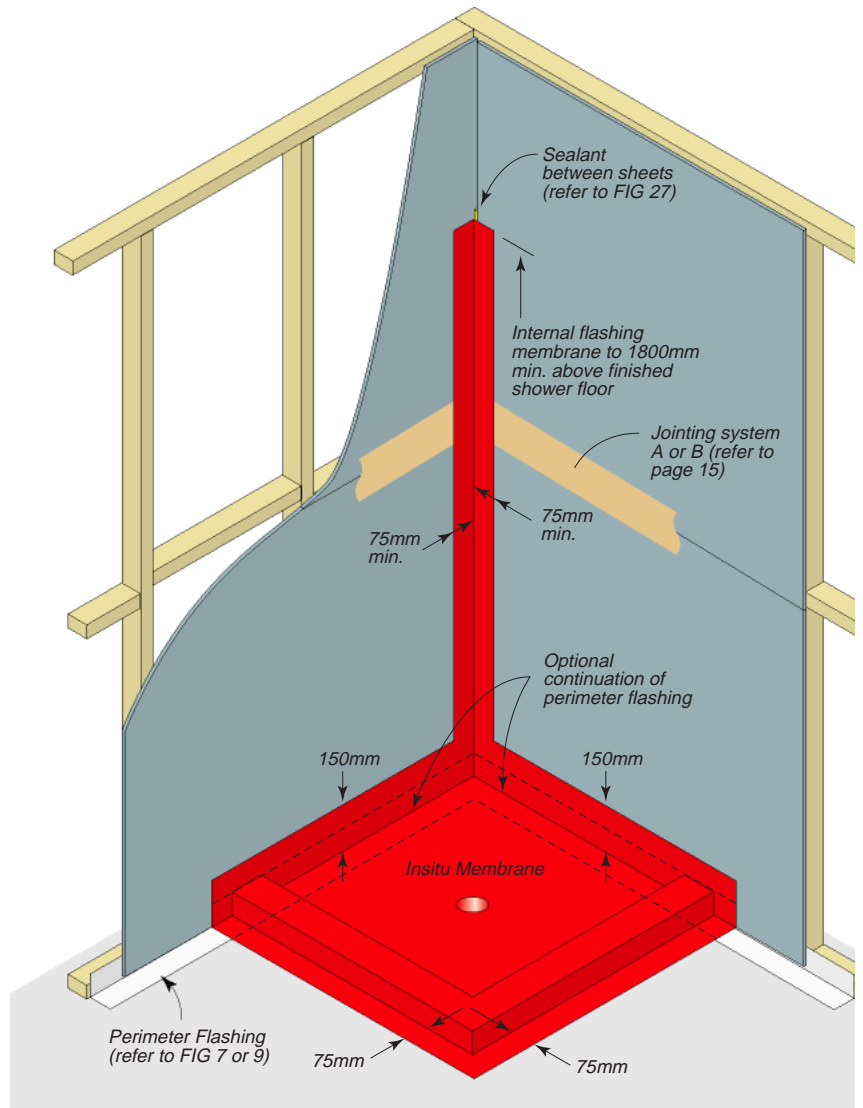
Proprietary liquid membrane materials are applied to the face of the CSR Fibre Cement Wallboard and floor to form an insitu internal tray. Follow respective manufacturers' instructions.

Apply membrane to the vertical corner to a minimum height of 1800mm from the finished floor surface. The flashing membrane is to extend 75mm minimum each side of the corner. Refer to FIG 16 and 27.

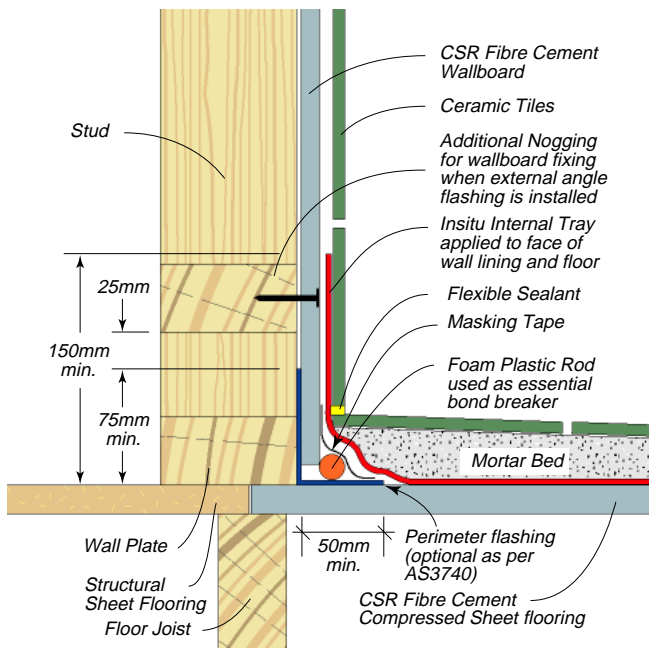
A compatible tile adhesive must be used to fix tiles to the membrane.

**Important:** Only insitu membrane materials appraised by recognised authorities are to be used. For example ABA Superflex I.

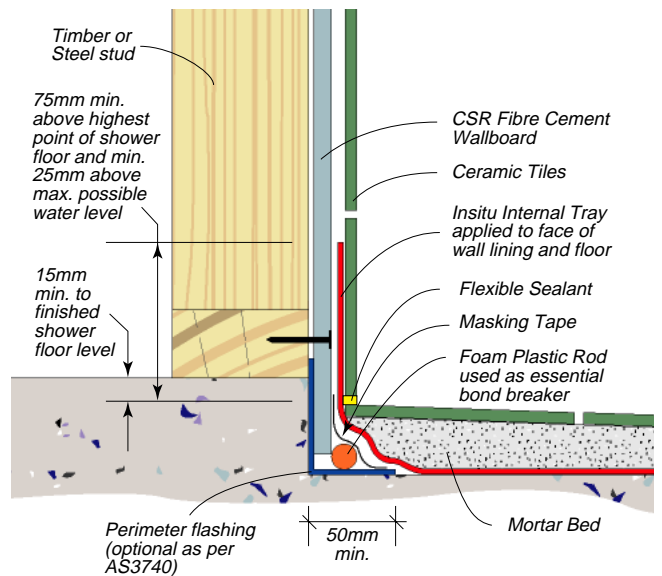
**FIG 16. TYPICAL DETAIL FOR INSITU INTERNAL TRAY SHOWER RECESS .**



**FIG 17. INSITU INTERNAL TRAY SHOWER RECESS (CERAMIC TILED) FOR SHEET FLOORING.**



**FIG 18. INSITU INTERNAL TRAY SHOWER RECESS (CERAMIC TILED) FOR SET-DOWN SLAB.**



# Bath, Shower Over Bath and Unenclosed Shower Installations.

## SHOWER OVER BATH AND UNENCLOSED SHOWER.

Install flashing angle to wall/floor junction. Cut and fix the CSR Fibre Cement Wallboard, leaving a 6mm gap between the sheet and the floor, the sheet and the bath, and between sheets forming internal corner.

Neatly cut holes for plumbing and bath penetrations.

Caulk around plumbing and bath penetrations and up internal corner of shower with flexible sealant.

Proprietary liquid membrane materials are applied to the face of the CSR Fibre Cement Wallboard and the floor. Refer to FIG 19 and 9

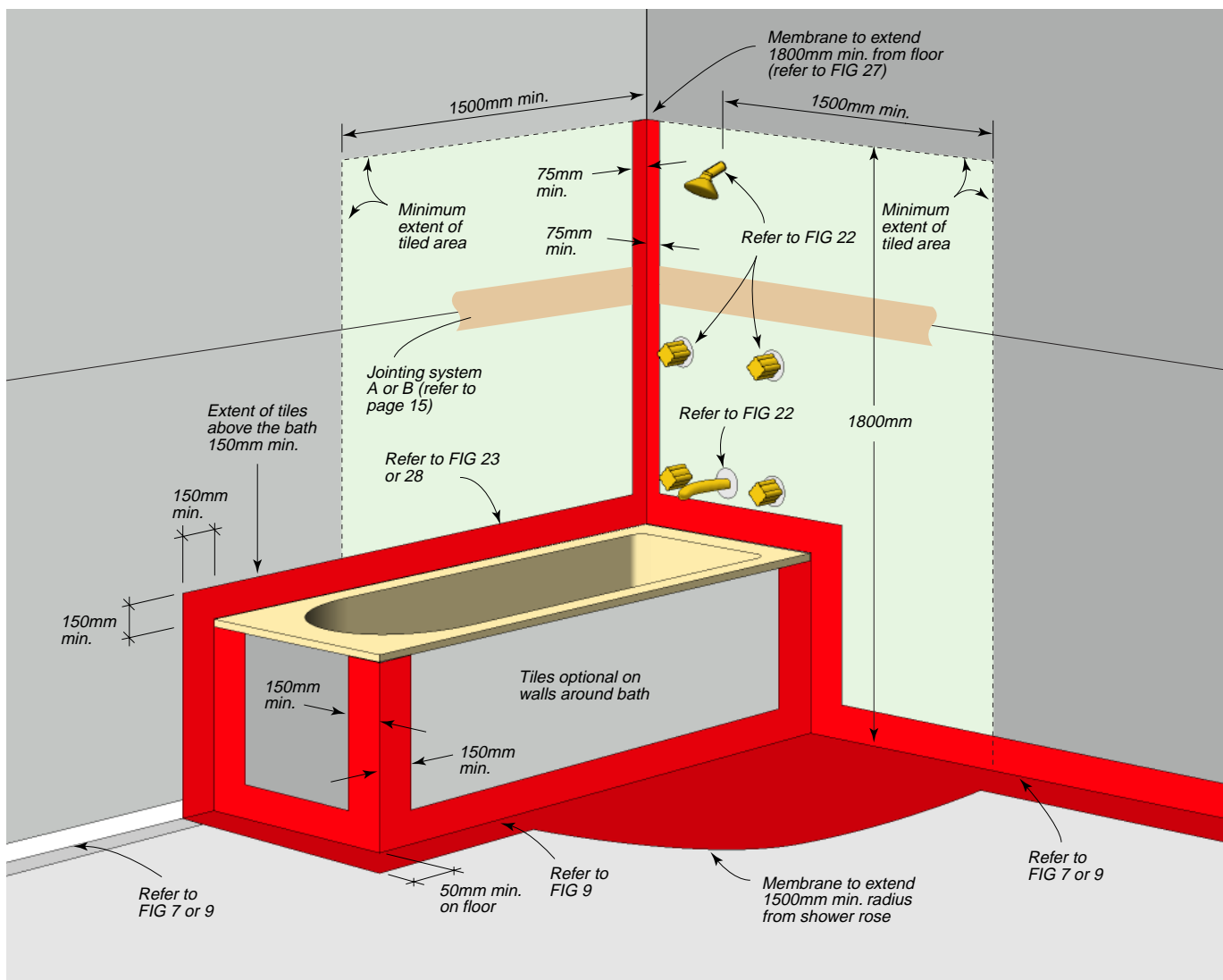
Always follow respective manufacturers' instructions.

For showers, apply a membrane to the vertical corner to a minimum height of 1800mm from the finished floor surface. The flashing membrane is to extend 75mm minimum each side of the corner. Refer to FIG 19 and 27

A compatible tile adhesive must be used to fix tiles to the membrane.

**Important:** Only insitu membrane materials appraised by recognised authorities are to be used. For example ABA Superflex I.

FIG 19. INSTALLATION LAYOUT FOR A SHOWER OVER BATH OR UNENCLOSED SHOWER AREA.





## BATH WITHOUT SHOWER.

FIG 20. INSTALLATION LAYOUT FOR A BATH WITHOUT SHOWER.

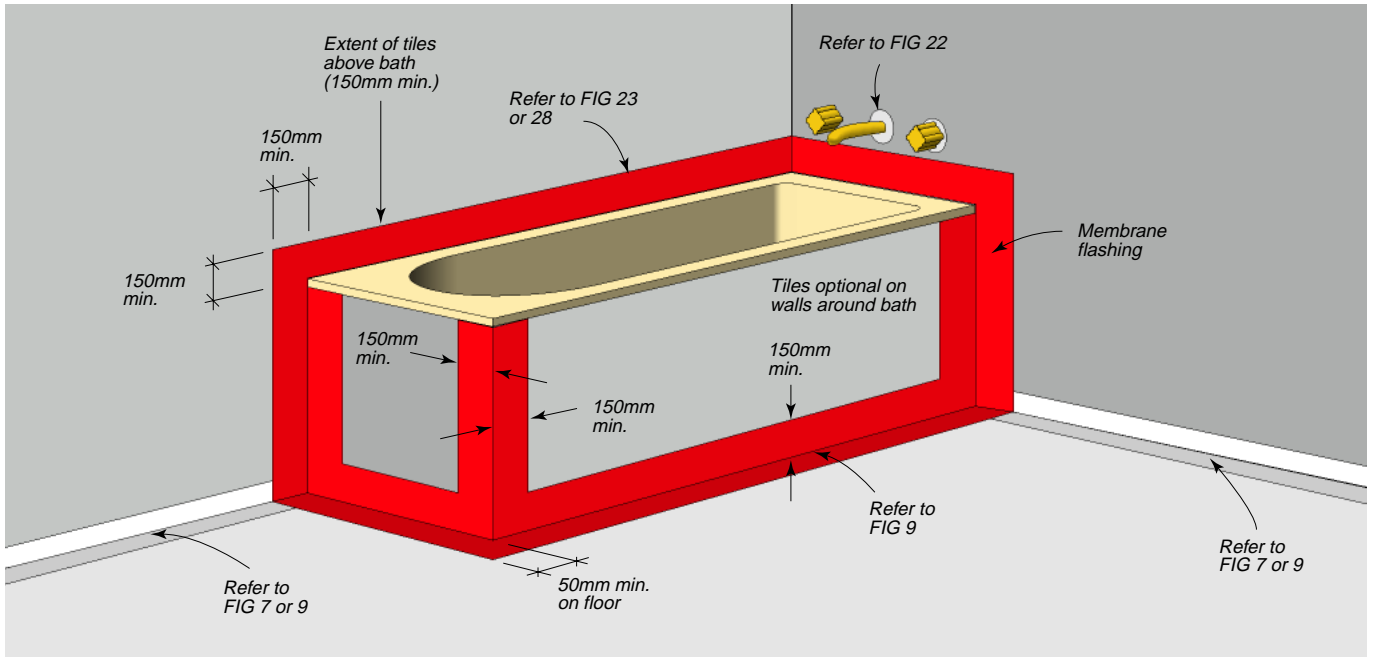
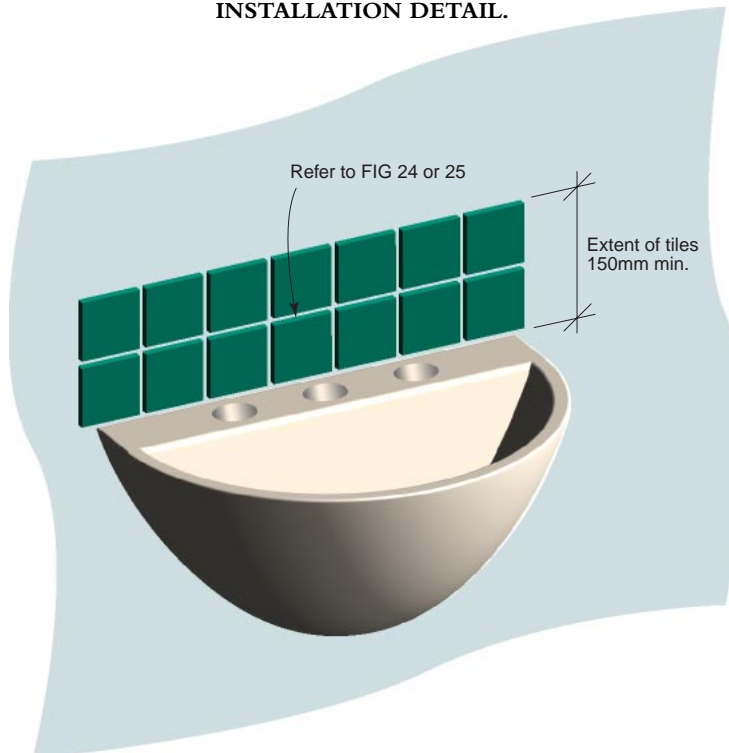
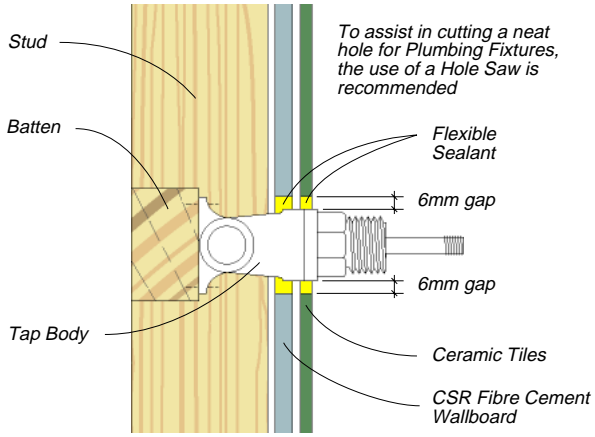


FIG 21. TYPICAL HAND BASIN INSTALLATION DETAIL.

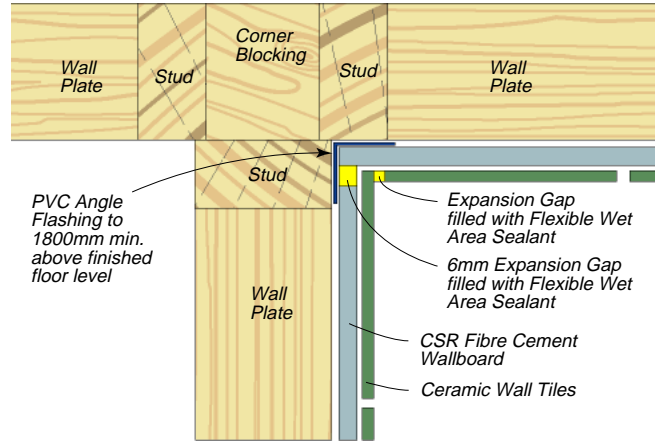


**FIG 22. TAP INSTALLATION.  
ELEVATION.**

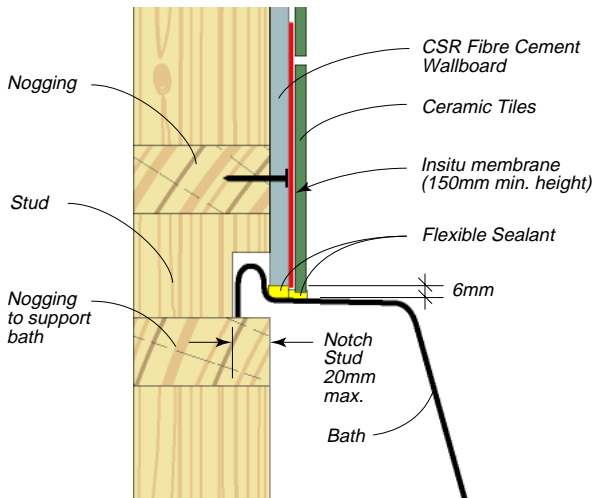


**FIG 26.**

**PVC ANGLE FLASHING AT SHOWER OR  
SHOWER OVER BATH INTERNAL CORNER.**

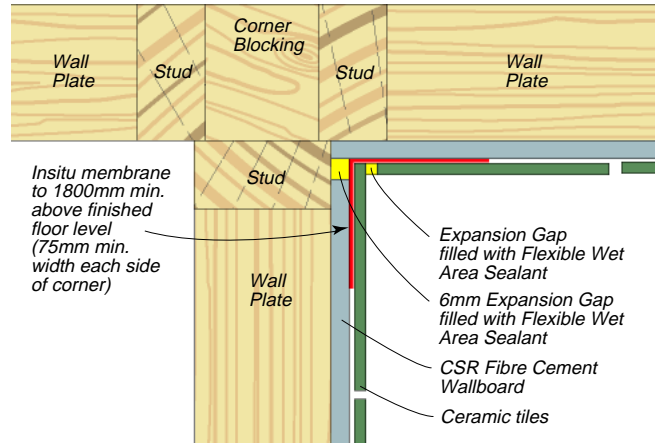


**FIG 23. BATH INSTALLATION.**

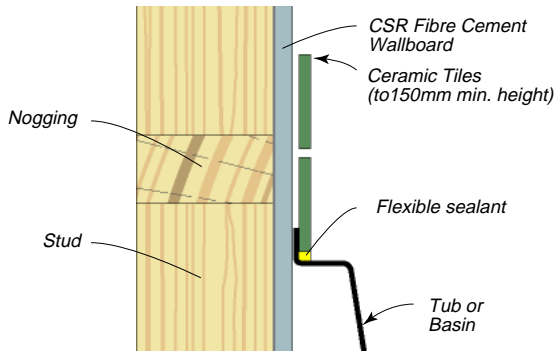


**FIG 27.**

**INSITU-MEMBRANE FLASHING AT SHOWER OR  
SHOWER OVER BATH INTERNAL CORNER.**

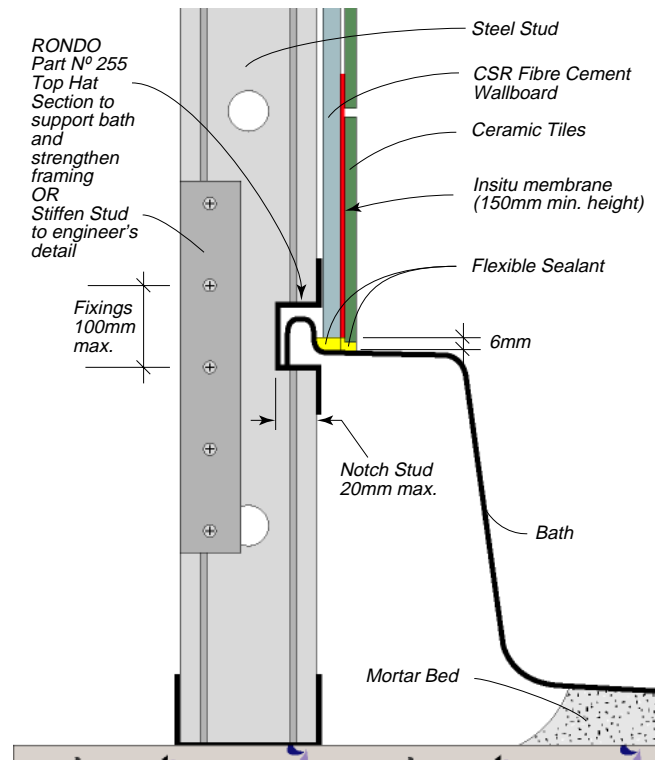


**FIG 24. LAUNDRY TUB/BASIN INSTALLATION.  
(CONTINUOUS LININGS)**

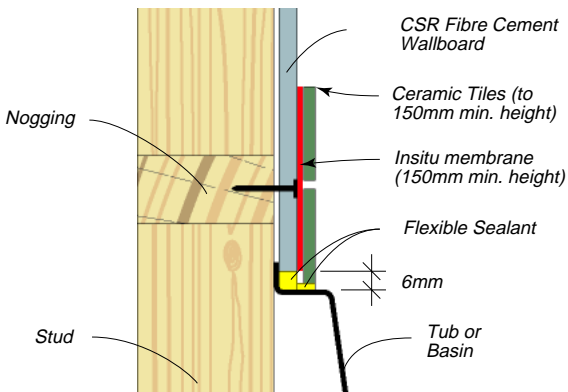


**FIG 28.**

**BATH INSTALLATION – STEEL STUD WALL.**



**FIG 25. ALTERNATIVE TUB/BASIN INSTALLATION  
(DISCONTINUOUS LININGS)**



# Jointing Systems.

After fixing CSR Fibre Cement Wallboard, the joints, corners and fastener heads require stopping to provide a surface suitable for decorating.

**TABLE 1 – JOINTING SYSTEM SELECTION**

Jointing System	Tape Coat	Tape	Second Coat	Finish Coat
<b>Tiled Areas and Category 1 &amp; 2 Wet Areas ①</b>				
A	Wet Area Base Coat	Paper Tape	Wet Area Base Coat	None
B	Wet Area Base Coat	Easytape™	Wet Area Base Coat	
<b>Non-Tiled Areas</b>				
C	Wet Area Base Coat	Paper Tape	Wet Area Base Coat	Jointmaster Topping Coat or Tape and Topping or Total Coat-Lite or Prolite Topping Compound or Easy Finish
D	Wet Area Base Coat	Easytape™	Wet Area Base Coat	
E	Base Coat 45 or 60	Paper Tape	Base Coat 45 or 60	
F	Tape and Topping	Paper Tape	Tape and Topping	
G	Total Coat-Lite	Paper Tape	Total Coat-Lite	
<b>Non-Tiled Areas (Areas of High Humidity)</b>				
H	Wet Area Base Coat	Easytape™	Wet Area Base Coat	Jointmaster Topping Coat or Tape and Topping or Total Coat-Lite or Prolite Topping Compound or Easy Finish

NOTE:

① It is a requirement of the BCA that a water resistant taping compound, such as CSR Gyprock®/Fibre Cement Wet Area Base Coat be used in these applications.

**Category 1 & 2 Wet Areas:**

These are defined in AS3740 ‘Waterproofing wet areas within buildings’.

**Areas of High Humidity:**

These are defined as either buildings in Australia north of the Tropic of Capricorn, or any application protected from the weather but exposed to the outside air environment, such as carport ceilings and soffits.

## JOINTING COMPOUNDS.

GYPROCK jointing compounds are classified as either setting type, drying type or acrylic drying type. All compounds can be applied by hand or with mechanical jointing tools.

Setting type compounds produce stronger joints and reduce installation delays and shrinkage associated with drying-type compounds. They are recommended for experienced trades people and have a defined setting time e.g. 40 or 60 minutes.

**Setting type compounds are:** BASE COAT 45, BASE COAT 60.

Additional coats may be applied over setting type compounds once they have gone hard (set), usually 40 minutes to an hour. A drying type compound must be used as a finish coat and must be completely dry before sanding. This may take up to 24 hours.

**Drying type compounds are:** JOINTMASTER TOPPING, TOTAL COAT-LITE, TAPE and TOPPING, EASY FINISH, and PRO-LITE TOPPING. These products are premixed and TOTAL COAT-LITE is also available dry.

**Acrylic drying type compounds are:** WET AREA BASE COAT. This compound, when used in conjunction with Paper Tape or Easytape™, produces very strong and durable joints. These joints are resistant to a some movement without displaying cracking.

Drying type compounds will shrink and harden with evaporation of their water content. The joints must be allowed to set and appear completely dry before re-coating or sanding. Actual drying times will be extended in low temperature and high humidity conditions. **Do not use a setting type compound over a drying type compound.**

## JOINTING TAPE.

Gyprock® Perforated Paper Tape has been developed to enable the preparation of strong joints and should be used on butt and recess joints as detailed in Tables 1.

Gyprock Easytape™ is ideal for use with Wet Area Base Coat, **provided it is bedded into the compound.** Sticking Easytape™ to the fibre cement sheet is not recommended, and could result in cracking.





**TILED AREAS  
JOINTING OF RECESSED JOINTS  
(SYSTEM A or B ONLY).**

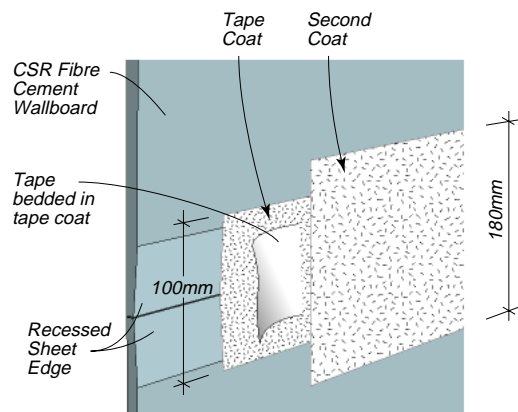
**Tape Coat.**

1. Fill recess evenly and fully with Wet Area Base Coat.
2. Bed in the tape centrally over the joint, and cover lightly with Wet Area Base Coat.
3. Cover all fastener heads with Wet Area Base Coat.
4. Allow tape coat to completely dry before proceeding.

**Second Coat.**

1. Apply a second coat, about 180mm width, with enough compound to cover the tape. Feather edges.
2. Cover fastener heads with a second coat, extending beyond the first coat by about 25mm.
3. Allow the second coat to dry completely before proceeding.

**FIG 29. RECESSED EDGE JOINTING – TILED AREAS.**

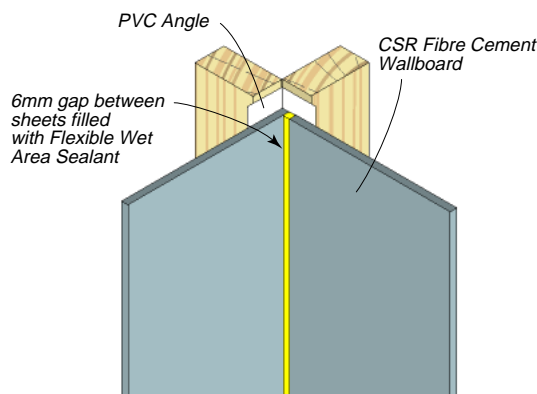


**TILED AREAS  
JOINTING OF INTERNAL ANGLES.**

**IMPORTANT:** Do not tape and set internal angle in tiled area. Refer to FIG 30, 26 and 27.

Above the tile line, tape and set the joint as shown for non-tiled areas. Refer to FIG 33.

**FIG 30. INTERNAL ANGLE  
TILED AREA.**



**NON-TILED AREAS.  
JOINTING OF RECESSED JOINTS  
(SYSTEMS C, D, E, F, G or H).**

**Tape Coat.**

1. Fill recess evenly and fully with tape coat.
2. Bed in the tape centrally over the joint, lightly cover with compound.
3. Cover all fastener heads with tape coat.
4. Allow tape coat to set/completely dry before proceeding.

**Second Coat.**

1. Apply a second coat, about 180mm width. Feather the edges with a trowel.
2. Cover fastener heads with a second coat, extending beyond the first coat by about 25mm.
3. Allow the second coat to set/completely dry before proceeding.

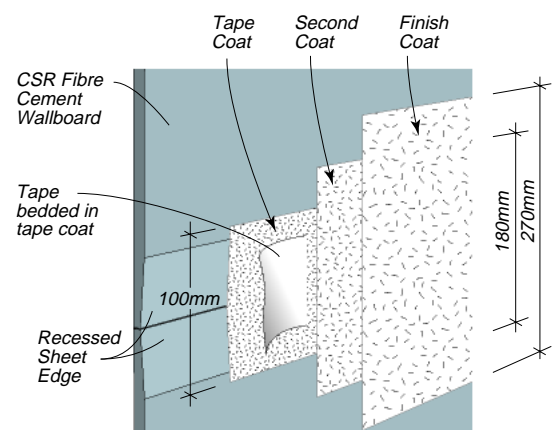
**Finish Coat.**

1. Apply a finish coat centrally over the second coat, about 270mm width. Feather the edges with a trowel. (If required, soften the outer edges of the compound with a damp water brush before feathering).
2. Cover fastener heads with a finish coat, extending beyond the second coat by about 25mm. Ensure that the edges of the compound are neatly feathered and that there are no knife edge marks left in the final stopping.

**Sanding.**

1. When set/completely dry, sand compound smooth with 150 grit paper or with 220 grit sanding mesh. Avoid any heavy pressure which might scuff the joints.

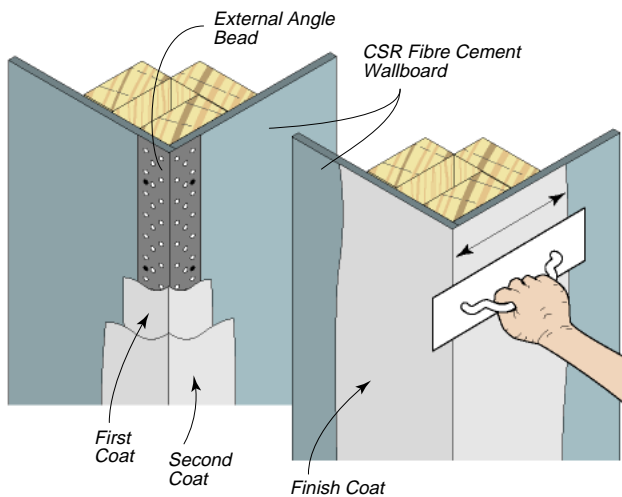
**FIG 31. RECESSED EDGE.  
NON-TILED AREAS.**



## NON-TILED AREAS JOINTING OF EXTERNAL ANGLES/ARCH BEADS.

1. Position external angle bead over the angle and sight it to ensure straightness before fixing with CSR Fibre Cement Wallboard fasteners.
2. External angles and arch beads are to be jointed with a three coat system as specified in Table 1 (excluding tape), and prepared as detailed for recessed joints.

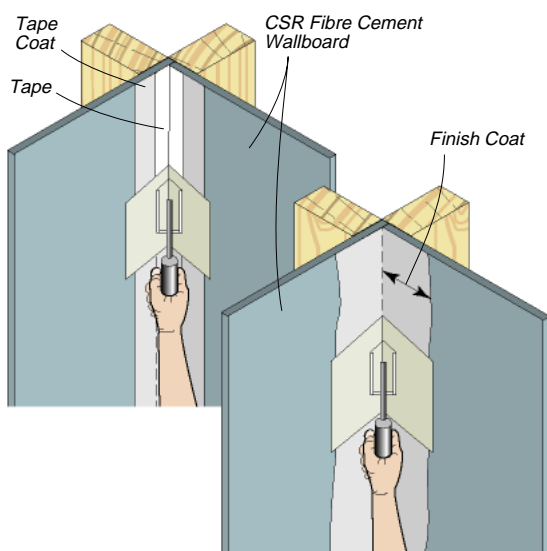
FIG 32. EXTERNAL ANGLE – NON-TILED AREAS.



## NON-TILED AREAS JOINTING OF INTERNAL ANGLES.

1. Apply tape coat to both sides of the joint, bed the tape and lightly cover with compound. Allow tape coat to set/completely dry before proceeding.
2. Apply a finish coat ensuring that the edges are well feathered. Allow finish coat to set/completely dry before sanding.

FIG 33. INTERNAL ANGLE – NON-TILED AREAS.



## NON-TILED AREAS JOINTING OF BUTT JOINTS (SYSTEMS C, D, E, F, G or H).

### Tape Coat.

1. Apply tape coat to both sides of the joint, bed the tape and lightly cover with compound.
2. The tape coat is to be spread approximately 150mm width each side of the joint.
3. Allow tape coat to set/completely dry before proceeding.

### Second Coat.

1. Apply a second coat, about 200mm width each side of the joint. This should have a gradual convex camber over the tape.
2. Allow compound to set/completely dry before proceeding.

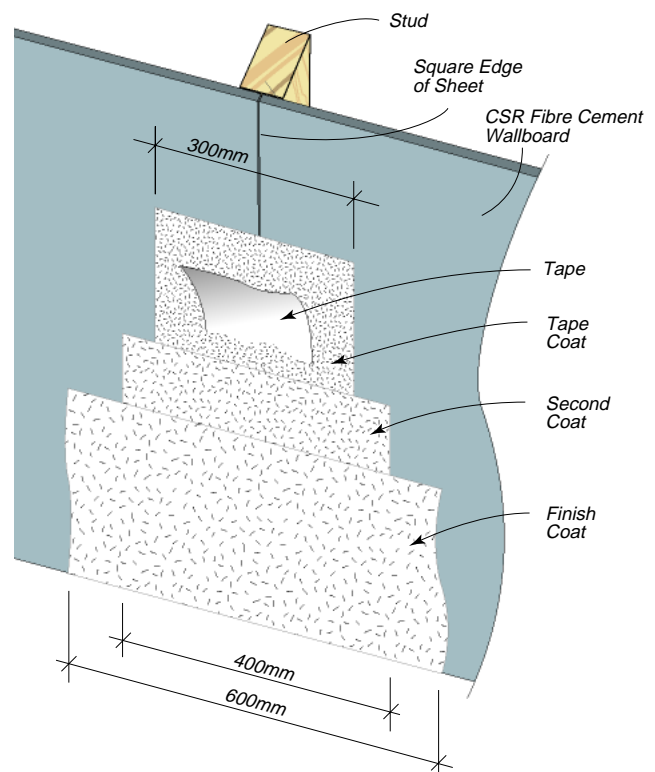
### Finishing Coat

1. Apply a finish coat centrally over the previous coat to form an even camber over the joint about 300mm width each side of the joint. Feather the edges with a trowel. (If required, soften the outer edges of the compound with a damp water brush before feathering).
2. Allow compounds to set/completely dry before proceeding.

### Sanding.

1. When set/completely dry, sand compound smooth with 150 grit paper or with 220 grit sanding mesh. Avoid any heavy pressure which might scuff the joints.

FIG 34. BUTT JOINT – NON-TILED AREAS.



# Decoration.

Where regulations require an impervious finish, such as to the walls adjoining or behind a bath, or for walls of a shower recess, the CSR Fibre Cement Wallboard in those areas must be finished with ceramic tiles.

Other areas must be painted or wallpapered.

## **PAINTING.**

For best results, the surface of CSR Fibre Cement Wallboard should be primed with a high quality latex primer before painting. Paint manufacturers' instructions are to be followed in all cases.

## **WALLPAPERING.**

For best results, the surface of CSR Fibre Cement Wallboard should be sealed with a pigmented oil base sealer before applying wallpaper or other decorative materials.

## **TILING.**

Tiles shall be installed in accordance with AS3958.1. Allowance must be made for expansion/contraction by leaving a gap between adjoining tiles in vertical corners. Fill gap with flexible wet area sealant.

Refer to section on Control Joints for additional requirements.

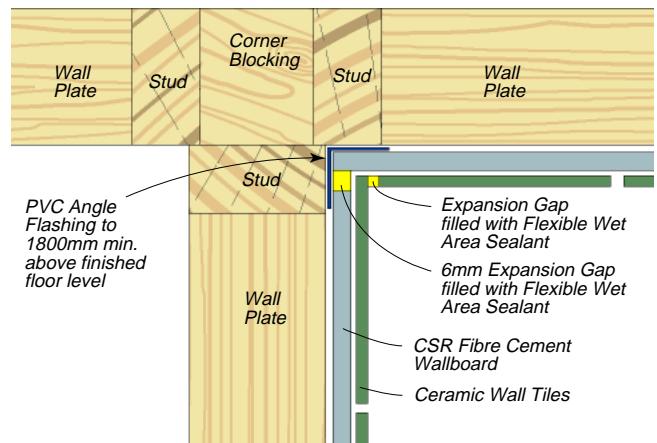
The tiler must ensure that all loose dust and foreign matter are cleaned off the surfaces to be tiled.

Proprietary tile adhesives that meet AS2358 : 1990 'Adhesives for ceramic wall tiles and mosaics' are recommended.

For best results, spread adhesive directly onto the surface to a depth of about 3mm, then 'rib' in a horizontal direction with a notched trowel having approximately 4.5mm x 4.5mm notches.

Tiling to be in accordance with the tile adhesive manufacturer's instructions. A compatible tile adhesive must be used to fix tiles to proprietary membranes.

**FIG 35.**  
**PROVISION FOR EXPANSION/CONTRACTION**  
**AT TILED INTERNAL CORNERS.**



# Compressed Sheet Wet Area Flooring System.

## Description.

CSR Fibre Cement Compressed Sheet can be fixed directly to structural framing to form a strong and water resistant flooring substrate for all domestic wet area applications.

CSR Fibre Cement Compressed Sheet is a compressed, autoclaved, cellulose fibre reinforced cement sheet.

CSR Fibre Cement Compressed Sheet is a dense, high strength, durable building product which is impervious to water. It has a smooth flat surface and a square edge finish.

## Advantages.

- Immune to permanent water damage and will not rot.
- Lightweight and economical building material (when compared with concrete).
- Easy to install.
- Ideal for upper storey construction.

## Material Properties.

CSR Fibre Cement Compressed Sheet conforms to the requirements of AS2908.2 : 1992 'Cellulose-cement products Part 2: Flat sheets'.

### MANUFACTURING TOLERANCES.

Mass 15mm thickness (nominal)	28kg/m <sup>2</sup>
Mass 18mm thickness (nominal)	34kg/m <sup>2</sup>
Length	+0 to -3mm
Width	+0 to -3mm
Thickness	+10% to -0%
Diagonals Difference (max)	3mm
Edge Straightness Deviation (max)	1.5mm

### FIRE RESISTANCE.

Under the Building Code of Australia, C1.1 Clause 2.5(e), CSR Fibre Cement is deemed to be non-combustible.

The Fire Hazard Properties, when tested in accordance with AS1530.3 are as follows:

### FIRE HAZARD INDICES.

Ignitability	0
Spread of Flame	0
Heat Evolved	0
Smoke Developed	0

## Components.

CSR Fibre Cement Compressed Sheet for flooring applications is available in the following range of sizes:

Thickness mm	Width mm	Length mm					
		1500	1800	2100	2400	2700	3000
15	900	✓	✓	✓	✓	✓	✓
	1200	✓	✓	✓	✓	✓	✓
18	900	✓	✓		✓		✓
	1200	✓	✓	✓	✓		✓

### FASTENERS.

N°10 x 50mm hot-dip galvanised steel or brass, countersunk head wood screws.



### ACCESSORIES.

**Flashing:** Hypalon™ Flashing Strip, 130mm width.

**Adhesive:** HydrEpoxy™ 501.



# Framing.

CSR Fibre Cement Compressed Sheet may be fixed over timber or steel joist systems.

Timber framing must comply with AS1684 : 1992 'National Timber Framing Code'.

Steel framing must comply with AS3623 : 1993 'Domestic Metal Framing'.

For upper storey construction, the use of durable seasoned timber or composite steel joists is recommended to minimise differential movement resulting from joist shrinkage.

Joists must have a minimum face width of 38mm and should be spaced as follows:

15mm sheet – 450mm maximum centres.

18mm sheet – 600mm maximum centres.

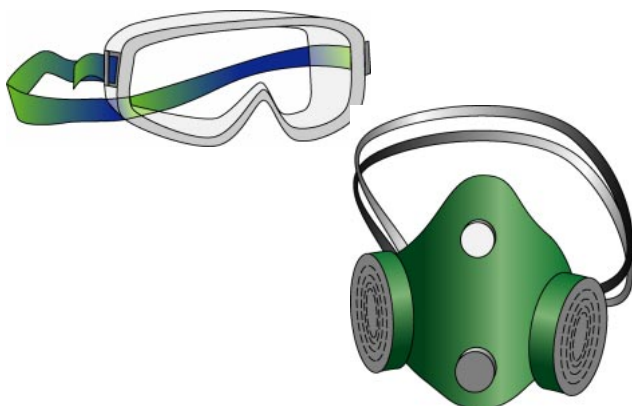
Wherever possible joist and sheet layout should be planned to ensure the long edges of compressed sheets are installed across the floor joists, and to ensure the end of the sheet is fixed on the centre line of the joist.

Sheets that are fixed parallel to the floor joists must have both long edges continuously supported along the centre line of joists. Sheet ends must also be fully supported by framing.

# Sheet Preparation.

When cutting or grinding fibre cement sheets using power tools, always ensure the work area is well ventilated. An approved dust mask (AS1715 and AS1716) and safety glasses (AS1337) must be worn. CSR recommends that hearing protection be worn where appropriate.

Refer to page 4 and 5 of this guide for detailed information



# Installation.

## FIXING COMPRESSED SHEETS.

Sheets may be fixed in place prior to or after wall framing is installed.

All compressed sheet ends must be supported by a framing member. Wherever possible plan sheet layout to avoid the need to cut sheets.

Sheets must be screw fixed at 450mm maximum centres along sheet edges and in the body of the sheet.

Screws must be kept a minimum of 12mm from the edge of sheets and 50mm from corners.

Screw holes must be pre-drilled using a masonry bit, allowing 1mm clearance over the diameter of screw.

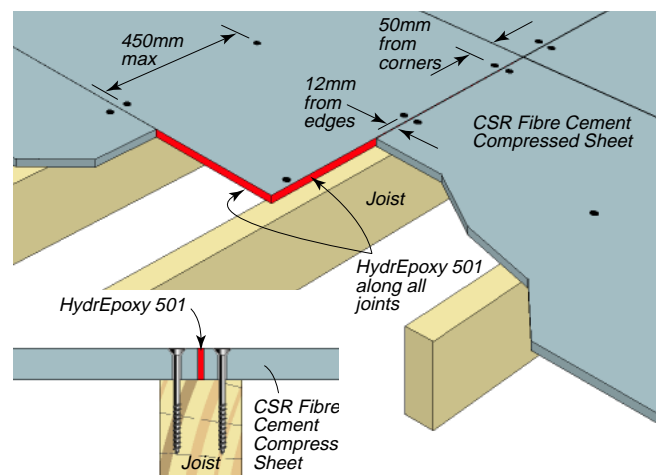
All sheet joints must be sealed using HydrEpoxy 501, a two part water based epoxy adhesive, that must be mixed just prior to use. It is important to ensure sheet edges are clean and free of any dust.

Adhesive must be applied to the edge of the first sheet once it is fixed in position. Butter adhesive along sheet edge, then position second sheet.

Ensure sheets are pushed together tightly for adequate adhesion, and the joint is filled.

It is not acceptable to force adhesive into the joint after both sheets have been fixed in place.

FIG 36. SHEET FIXING.



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

Hypalon™ Flashing Strip, 130mm wide, fixed to floor only using HydrEpoxy™ 501.

Also refer to FIG 7, 8 and 9.

FIG 37. PERIMETER FLASHING.

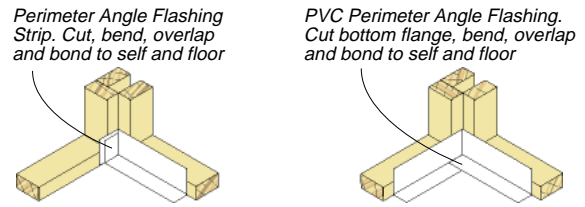
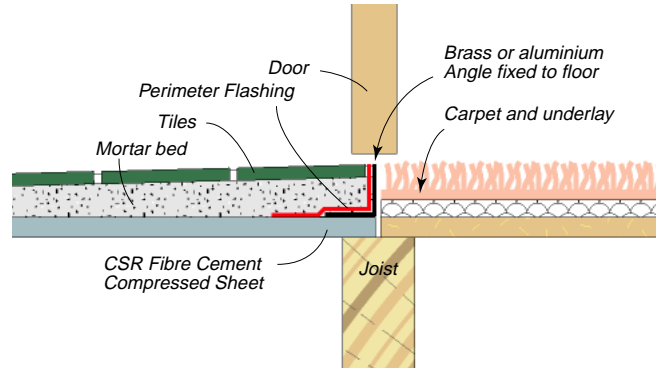


FIG 38. DOORWAY FLASHING DETAIL.



NOTE: At doorways, a brass or aluminium angle should be fixed to the floor to support the flashing and protect the tiles.

## INSITU APPLIED MEMBRANE.

A continuous insitu membrane must be applied to shower recess areas as shown in FIG 39 or 40.

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 sheet level and/or to a minimum 50mm above any shower hob.

NOTE: For further details on waterproofing refer to Australian Standard AS3740 : 1994.

FIG 39. SHOWER RECESS WITH HOB.

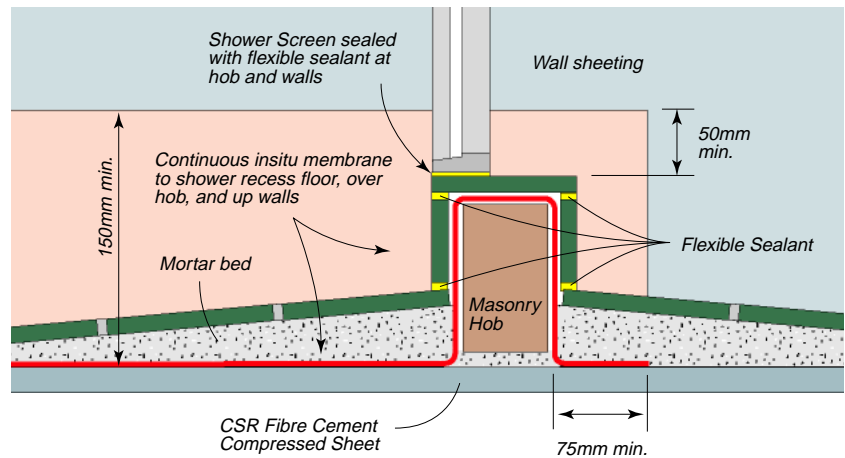
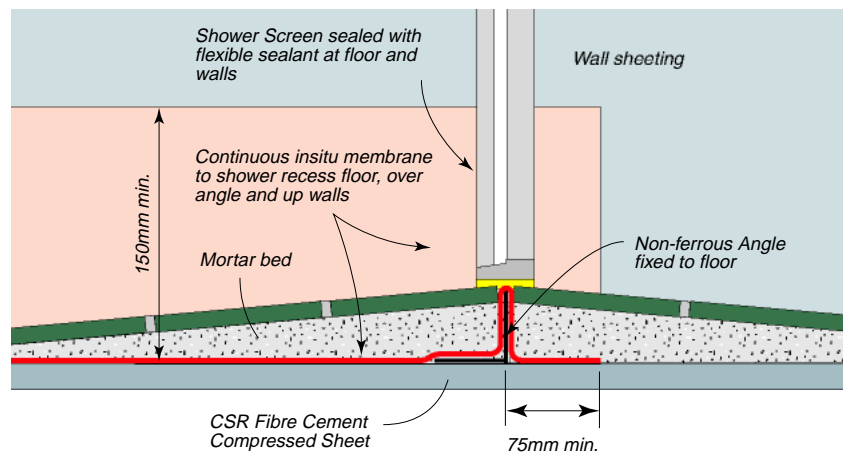


FIG 40. HOBLESS SHOWER RECESS.

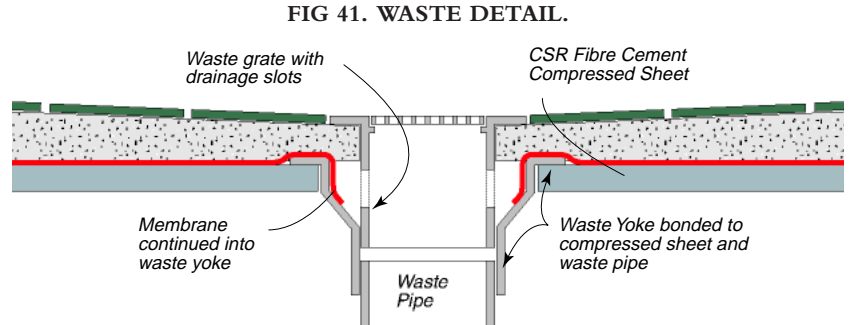


## PLUMBING WASTES.

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 using HydrEpoxy™ 501 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.



# Tile Laying.

If a fall to waste is not required, tiles may be fixed directly to CSR Fibre Cement Compressed Sheet.

Tile adhesive must conform to Australian Standard AS2358 'Adhesives - for fixing ceramic tiles'.

If a fall to waste is required, tiles must be bedded into a mortar bed which is not less than 12mm thick.

In all cases the tile and tile adhesive manufacturers' instructions should be followed.



# Fibre Cement

## **CSR Fibre Cement Web Site.**

[www.csrfibreceement.com.au](http://www.csrfibreceement.com.au)

## **CSR *designLINK*® Technical Support Service.**

Telephone: 1800 621 117.

### **New South Wales and ACT.**

376 Victoria Street, Wetherill Park NSW 2164.  
Telephone: (02) 9844 7944. Facsimile: (02) 9844 7877.

### **Queensland.**

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Telephone: (07) 3212 6400. Facsimile: (07) 3212 6456.

### **Victoria.**

159 Wellington Road, Clayton VIC 3168.  
Telephone: (03) 9265 4000. Facsimile: (03) 9265 4011.

### **South Australia.**

Lot 100 Sharp Court, Mawson Lakes SA 5095.  
Telephone: (08) 8344 0666. Facsimile: (08) 8344 0644.

### **Western Australia.**

21 Sheffield Road, Welshpool WA 6106.  
Telephone: (08) 9365 1666. Facsimile: (08) 9365 1656.

### **Tasmania.**

PO Box 61, Glenorchy TAS 7010.  
Telephone: 0419 477 601. Facsimile: (03) 6249 2701.

### **Northern Territory.**

Lot 800 Stuart Highway, Berrimah NT 0828.  
Telephone: (08) 8984 4070. Facsimile: (08) 8947 0034.

## 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 807 668.

## Guarantee.

CSR Limited warrants its Fibre Cement products to be free of defects in materials and manufacture.

If a CSR product does not meet our standard, we will, at our option, replace or repair it, supply an equivalent product, or pay for doing one of these.

This warranty excludes all other warranties and liability for damage or loss in connection with defects in CSR's product, other than those compulsorily imposed by legislation, notably the Trade Practices Act.

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