



cemintel™
CREATE AND CONSTRUCT

CSR

CSR CEMINTEL™

WET AREA SYSTEMS



FC:101



RESIDENTIAL INTERIOR WET AREA LINING & FLOORING SYSTEMS

APRIL 2016

CeminSeal™ Wallboard features waterblock technology, which provides improved water resistance and jointing properties for superior performance in wet area lining applications. Cemintel™ Compressed Sheet is a strong, dense water resistant flooring substrate which is ideal for wet area applications.

CONTENTS

WET AREA LINING SYSTEMS

DESCRIPTION, ADVANTAGES, APPLICATIONS	2
MATERIAL PROPERTIES	3
COMPONENTS	3-4
HANDLING, STORAGE & SAFETY	4
SHEET PREPARATION	5
CONTROL JOINTS	6
FRAMING	6
CEMINSEAL™ WALLBOARD INSTALLATION	6-7
GENERAL WET AREA FLASHING	8
SHOWER RECESS CONSTRUCTION	9-11
BATH, SHOWER OVER BATH AND UNENCLOSED SHOWER CONSTRUCTION	12-13
CAULKING & FLASHING DETAILS	14
JOINTING SYSTEMS	15-18
DECORATION	19
WET AREA FLOORING SYSTEM	
DESCRIPTION & ADVANTAGES	20
MATERIAL PROPERTIES	20
COMPONENTS	20
FRAMING	21
SHEET PREPARATION	21
INSTALLATION	21
WATERPROOFING	22-23
TILE LAYING	23
HEALTH & SAFETY	24
MANUFACTURED FOR LIFE	24
CONTACTS	24

WET AREA LINING SYSTEMS

CeminSeal™ Wallboard features an embedded micro waterblock technology that prevents water penetrating into the sheet, repelling water and providing a more stable sheet.

Ideal for lining areas such as bathrooms, laundries and semi-exposed ceilings, and for construction of impact resistant walls.

CeminSeal™ Wallboard has a recess on both long edges so that sheets may be taped and set with CSR Gyprock and Cemintel™ Jointing materials. Once jointed it may be tiled, painted or wall papered as desired.

ADVANTAGES

CeminSeal™ Wallboard Offers:

- Waterblocking technology
- 95% stronger joint and compound adhesion
- 100% paint adhesion
- Simple and quick to install
- Fewer call backs, less risk

APPLICATIONS



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

Each wet area is classified as having a high, medium or low level of risk. Certain walls and junctions in each of the levels are required to be waterproof or water resistant.

Water resistant walls are those areas enclosing and within a shower compartment, and walls adjacent to fixed vessels such as baths, spas and tubs, i.e. part wall areas within bathrooms, ensuites and laundries.

Waterproof areas are junctions between walls and between floors and walls in showers and bathrooms, and near baths, spas, sinks etc.

Cemintel™ Wet Area Lining Systems offer proven, reliable and cost effective solutions to all residential wet areas.

WATER RESISTANT AREAS

CeminSeal™ Wallboard is used as a substrate for ceramic tiles, and must be fastened with nails or screws only. CeminSeal™ Wallboard sheets are then jointed with CSR Gyprock™ Wet Area Base Coat and tape.

GENERAL WET AREAS

CeminSeal™ Wallboard is installed into these areas in a similar manner to that used for fixing standard Gyprock™ plasterboard.

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

MATERIAL PROPERTIES

CeminSeal™ Wallboard Sheet conforms to the requirements of AS2908.2 : 1992 'Cellulose-cement products Part 2: Flat sheets'. Type B, Category 3.

MANUFACTURING PROPERTIES

Mass 6mm thickness (nominal)	9.7kg/m ²
Mass 9mm thickness (nominal)	14.3kg/m ²
Mass 12mm thickness (nominal)	18.8kg/m ²
Length	+0 to -4mm
Width	+0 to -3mm
Thickness	+0.5 to -0mm
Diagonals Difference (max)	3mm

FIRE RESISTANCE

In accordance with the Building Code of Australia, Part 3.7.1.2, Cemintel™ fibre cement sheets can be used wherever non-combustible material is required by the code.

Early Fire Hazard Indices for CeminSeal™ Wallboard are:

FIRE HAZARD INDICES

Ignitability	0
Spread of Flame	0
Heat Evolved	0
Smoke Developed	0
Group Number	1
Average Specific Extinction Area	<250m ² /kg

COMPONENTS

CEMINSEAL™ WALLBOARD

CeminSeal™ Wallboard is manufactured in the following sizes, with the two long edges recessed to allow seamless jointing.

Length (mm)	Width (mm)		
	900	1200	1350
1800	-	✓	-
2400	-	✓ ■	✓
2700	-	✓ ■	-
3000	✓	✓ ■ ✦	✓
3600	-	✓	✓
4200	-	✓	✓

Thickness
(6mm RE = ✓) (9mm RE = ■) (12mm RE = ✦)

FASTENERS

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

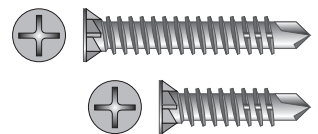
CeminSeal™ Wallboard Nails:

Hot-dip galvanised for softwood and hardwood framing.



Sheet Thickness	Fastener Size	Qty	Order N°
6mm	2.8mm x 30mm	2kg	77257
9 to 12mm	2.8mm x 40mm	2kg	77258

Screws for fixing CeminSeal™ Wallboard to Steel Framing:



Sheet Thickness	Fastener Size	Qty	Order N°
For up to 0.8mm steel framing and 6mm wallboard	8 x 20mm Needle Point (Class 3)	1000	109243
For 6 to 9mm sheet	Buildex FibreTEKS™ 9-18 x 25mm (Class 4)	1000	125651
For 9 to 12mm sheet	Buildex FibreTEKS™ 9-18 x 30mm (Class 4)	1000	125614



STUD ADHESIVE

Gyprock™ Acrylic Stud Adhesive is coloured blue for easy identification. It can be used on both timber and steel in temperatures not less than 5°C.

Contact surface must be free of oil, grease or other foreign materials before application. The adhesive is applied with a broad knife. This product is suitable for use with pre-painted metal battens and some treated timbers. Always follow directions on packaging when using CSR stud adhesive.

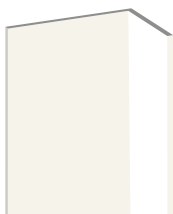
Qty	Order N°
900g sausage	95082
5.5kg bucket	10091

JOINTING MATERIALS

Product	Qty	Order N°
Gyprock™ and Cemintel™ Wet Area Base Coat	15kg bucket	10146
Gyprock™ Paper Joint Reinforcing Tape	75m 150m	10589 10586
Gyprock Easytape™	90m	10584
Gyprock™ finishing compounds (for non-tiled areas only)	–	Refer to Jointing Systems section later in this guide

FLASHING

- **Countersunk Head Screw:**
Cemintel™ PVC angle 50 x 50mm.
For use with external and preformed shower trays.
- **Perimeter Flashing Angle:**
Cemintel™ PVC angle 50 x 75mm.
For use at wall/floor junction.



Product	Order N°
50 x 50 x 2400mm PVC Angle	11205
50 x 75 x 3000mm PVC Angle	11206

- **Internal Vertical Flashing*:**
A proprietary impervious barrier assessed and classified in accordance with AS4858.
- **Insitu Membrane/Internal Tray*:**
A proprietary impervious barrier assessed and classified in accordance with AS4858.
- **Perimeter Flashing for Step-Down Slab*:**
Proprietary product such as Sikadur™ Combiflex 150mm or equivalent.
- **Adhesive Fulaprene 303*:**
For fixing PVC angle to slab, timber or fibre cement flooring.

*Not supplied by CSR.

FLEXIBLE SEALANT

- **Gyprock™ Wet Area Acrylic Sealant:**
For joints in tiles and other substrates. Paintable.
- **Sikaflex Pro:**
For joints in fibre cement substrate.

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

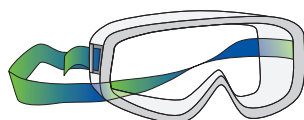
HANDLING AND STORAGE

All Cemintel™ 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.



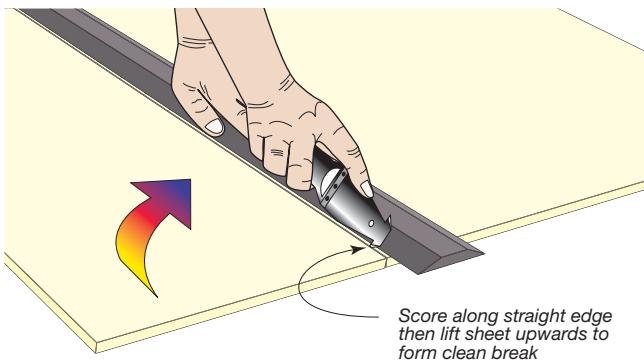
SHEET PREPARATION

CUTTING

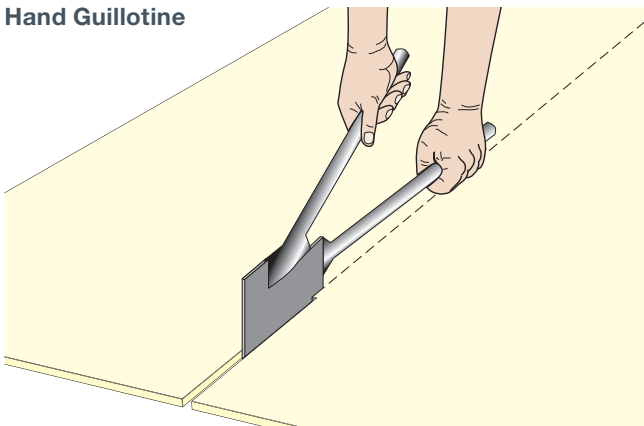
Cemintel™ Sheets may be cut on-site using any of the following methods.

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.

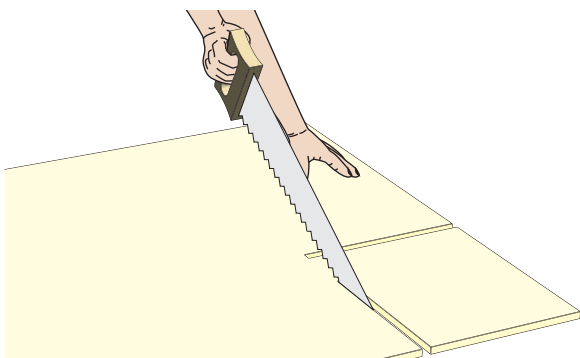


Hand Guillotine



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 Blade

When it is necessary to use power tools for cutting Cemintel™ Sheets, CSR recommends using the Cemintel™ Power Saw Blade. This blade is specifically designed for cutting cement based sheets. Ideal for use with dustless circular saws fitted with vacuum extraction systems (1500RPM maximum).



Cemintel™ Power Saw Blade.

Product	Order N°
Cemintel™ Power Saw Blade 1.5mm x 125mm	134449

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 be 1.5mm to 2mm deep, and should be approximately 35mm wide.



Hitachi Easy Bevel Attachment with Dust Extraction System fitted to a grinder.

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 no more than 7.2m spacings.
2. In tiled areas at no more than 4.2m spacings and at internal corners.
3. To coincide with control joints in the supporting frame.
4. At changes of framing type.

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

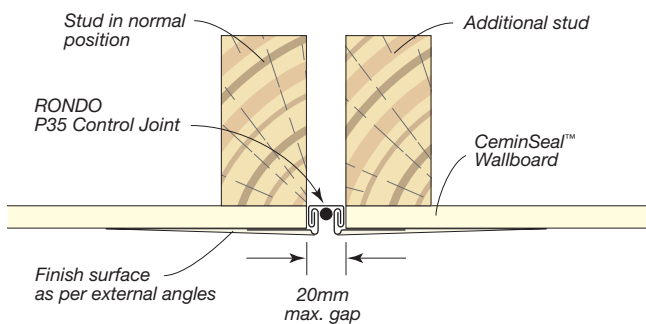
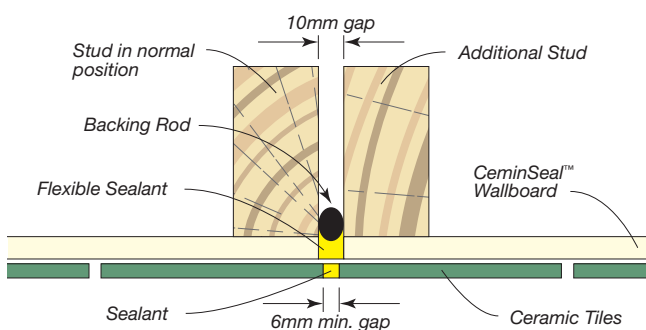


FIG 2: Control Joint For Tiled Areas



FRAMING

CeminSeal™ 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.

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 CeminSeal™ Wallboard will finish in front of the upturn on the receptacle.

For masonry substrates, wallboard must be fixed to furring channels in both tiled and non-tiled areas.

CEMINSEAL™ WALLBOARD INSTALLATION

Generally, it is recommended that all CeminSeal™ 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.

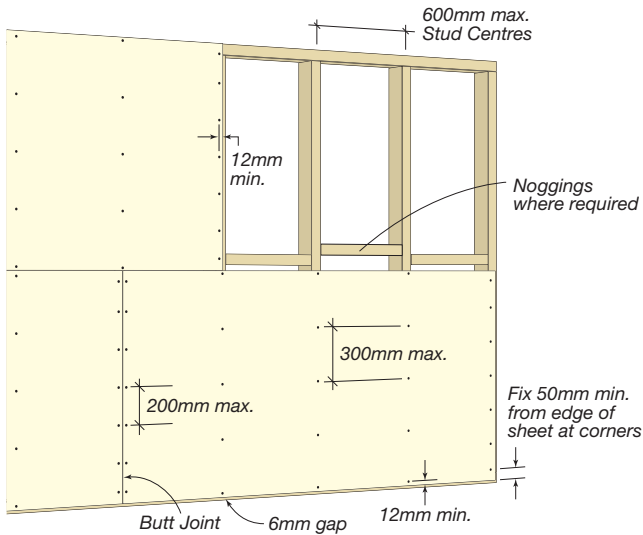
Install the bottom sheet first, with the lower edge a minimum 6mm clear of the finished floor.

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 3: CeminSeal™ Wallboard Installation – Fastener Method – Non-Tiled Areas



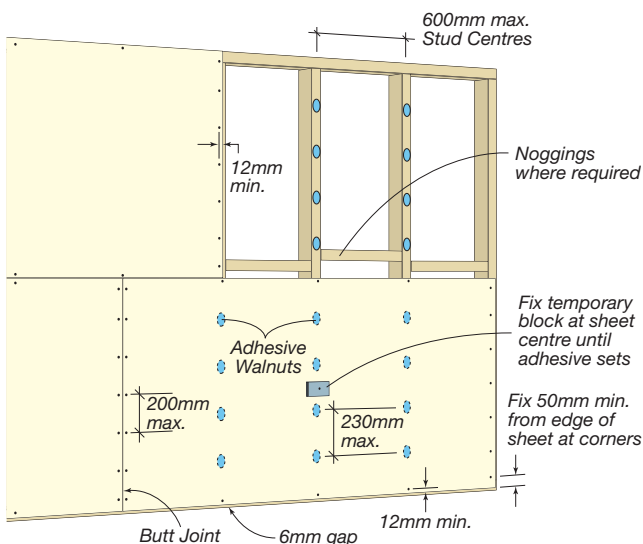
Alternatively the adhesive/fastener system may be used.

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 4: CeminSeal™ 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.

CeminSeal™ 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/m² in weight. For wall tiles up to 32kg/m², sheets must be fixed at 100mm maximum centres to all studs.

FIG 5: CeminSeal™ Wallboard Installation – Fastener Method Tiled Areas

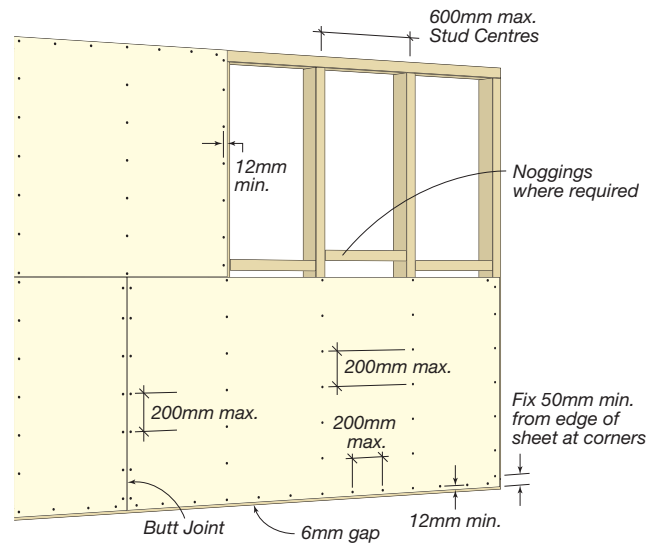
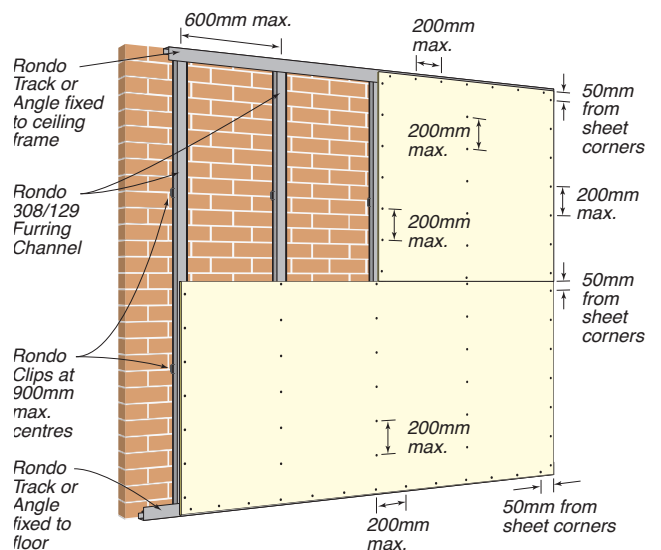


FIG 6: CeminSeal™ Wallboard Installation – Furring Channel and Fastener Method – Tiled Areas



Note: For non-tiled areas, sheet fixing onto furring channels may be by adhesive and fastener fixing method. Refer to FIG 4.

GENERAL WET AREA FLASHING

Note: For additional floor details, 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 approved Flashing Strip 130mm minimum 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: A proprietary impervious barrier assessed and classified in accordance with AS4858. 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 7: Perimeter Flashing – PVC Angle in General Wet Area

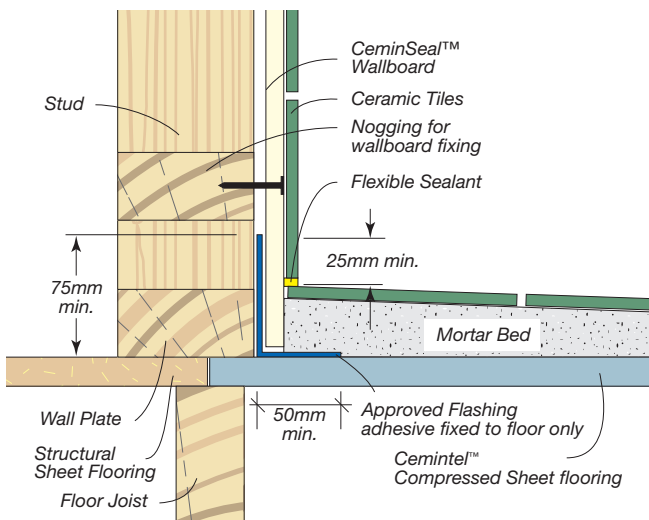


FIG 8: Perimeter Flashing – For Step-Down Slab in General Wet Area

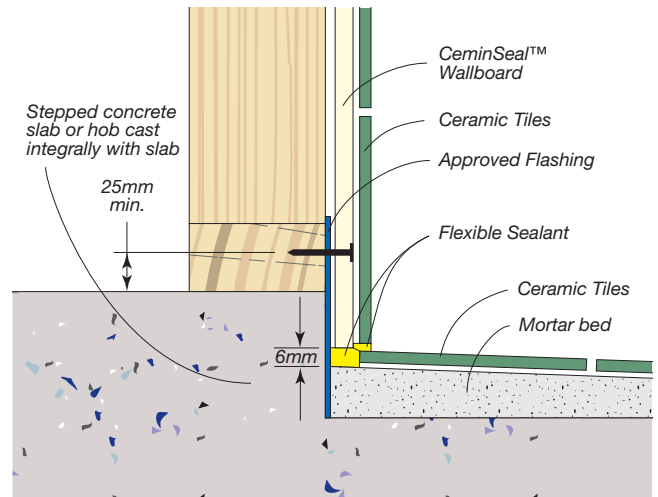
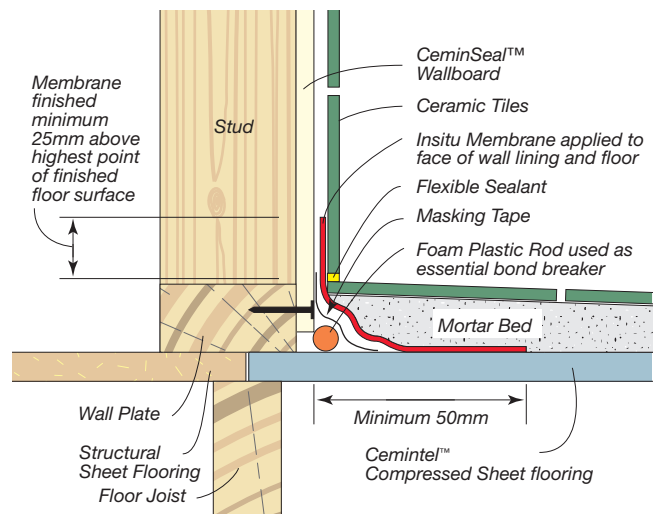


FIG 9: Perimeter Flashing. – Insitu Membrane in General Wet Area



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.

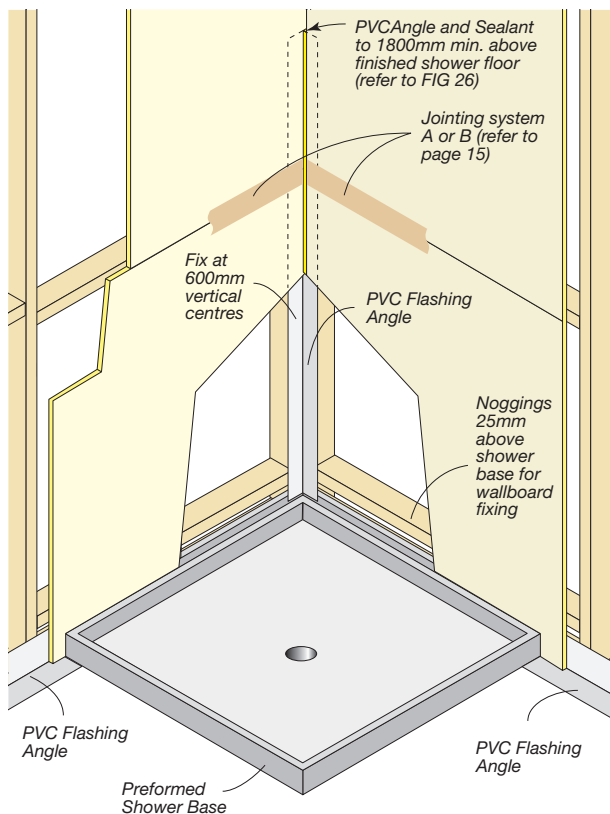
Cut and install PVC angle to internal corner, fixing the angle to studs at 600mm centres. Carry angle down over the shower base lip, stopping 6mm above shower base. PVC angle is to extend a minimum height of 1800mm from the finished floor surface.

Cut and fix the CeminSeal™ 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 CeminSeal™ Wallboard and the shower base, and up internal corner of shower with flexible sealant.

FIG 10: Typical Detail – Preformed Shower Base



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 11: Preformed Shower Base – On Sheet Flooring

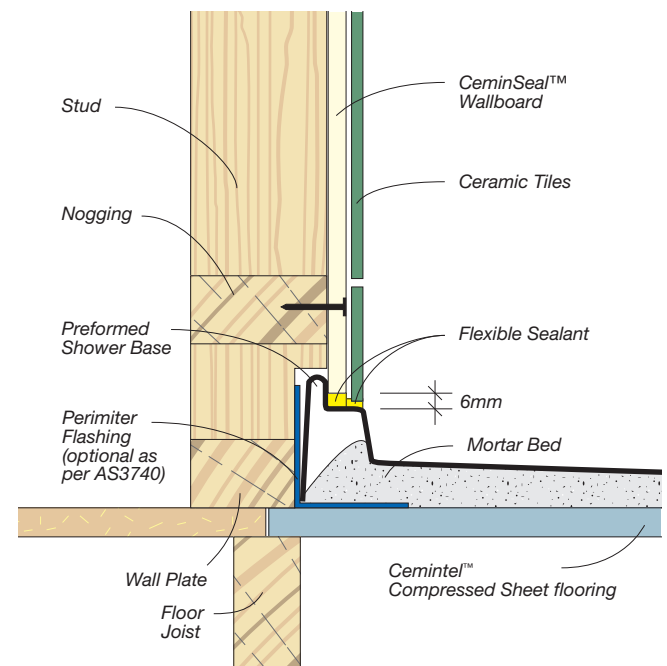
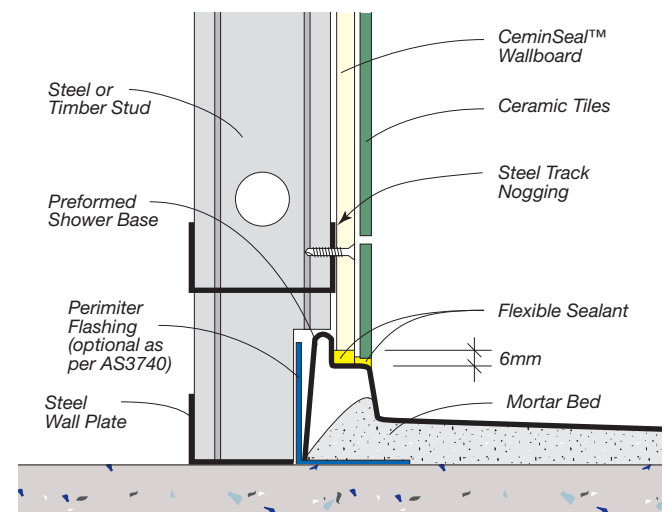


FIG 12: Preformed Shower Base – On Concrete Floor



EXTERNAL SHOWER TRAY

Install the shower tray, as per the regulations, prior to the installation of CeminSeal™ 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. PVC angle is to extend a minimum height of 1800mm from the finished floor surface.

Cut and fix the CeminSeal™ 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 CeminSeal™ 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

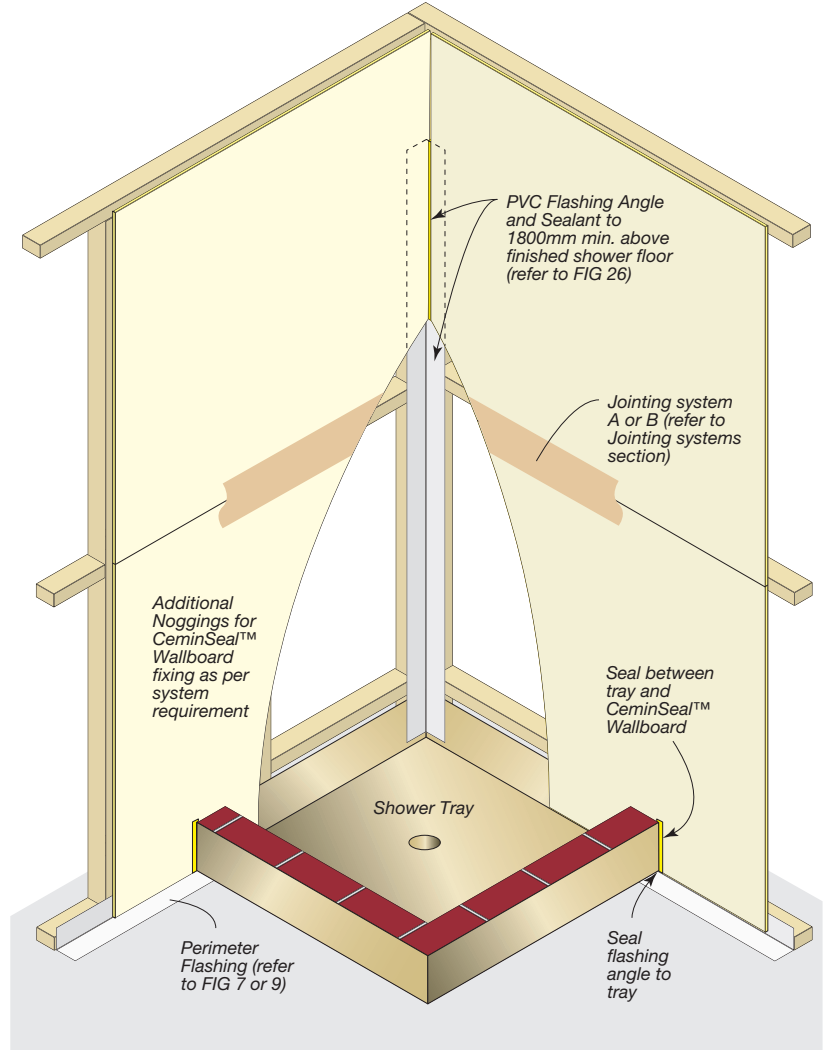


FIG 14: External Tray Shower Recess for Sheet Flooring

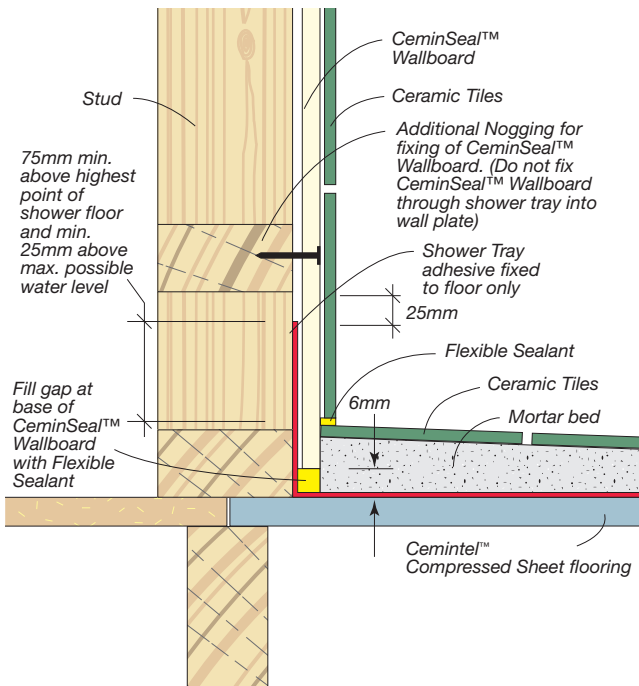
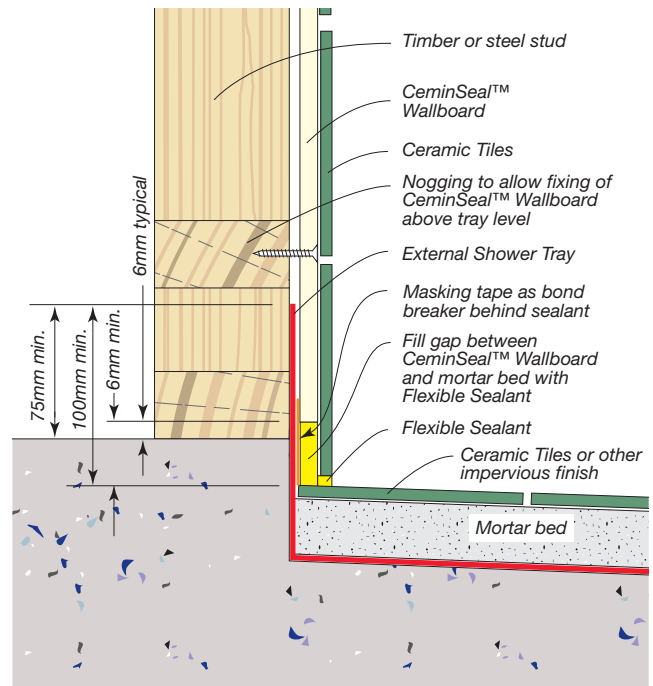


FIG 15: External Tray Shower Recess for Set-Down Concrete Slab



INSITU-FORMED INTERNAL SHOWER TRAY

Install flashing angle to wall/floor junction. Cut and fix the CeminSeal™ 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 CeminSeal™ 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.

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

Important: Use only a proprietary impervious barrier assessed and classified in accordance with AS4858.

FIG 16: Typical Detail for Insitu Internal Tray Shower Recess

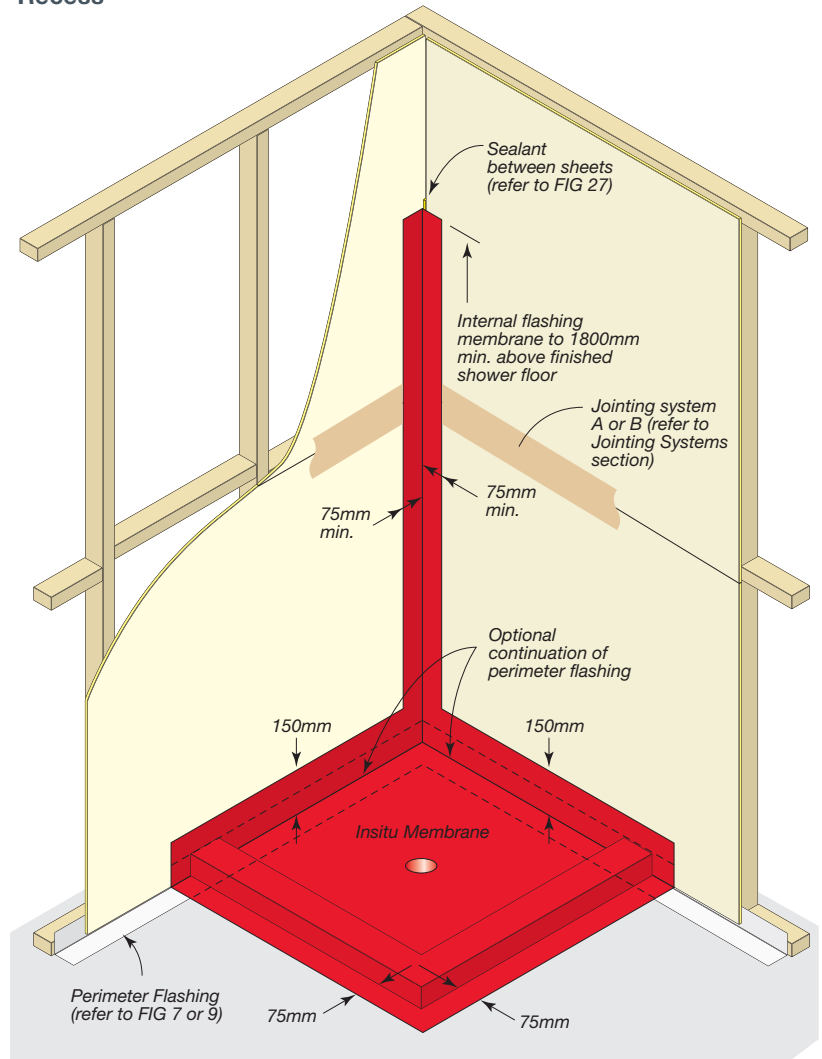


FIG 17: Insitu Internal Tray Shower Recess (Ceramic Tiled) For Sheet Flooring

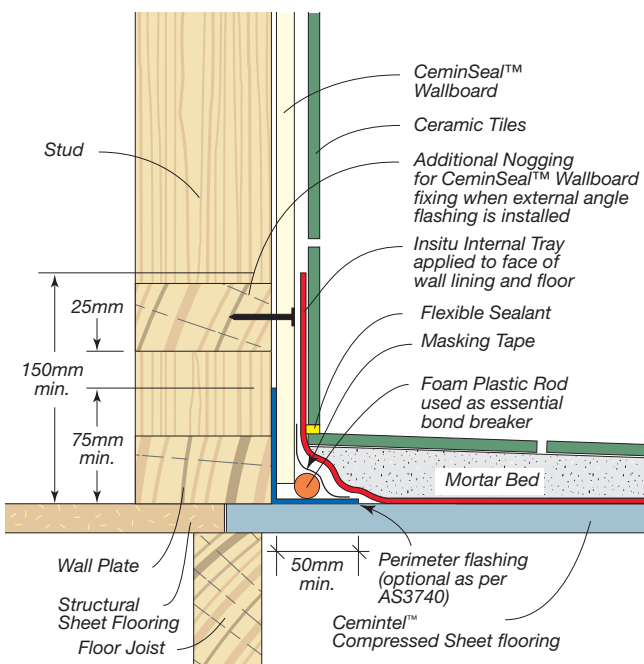
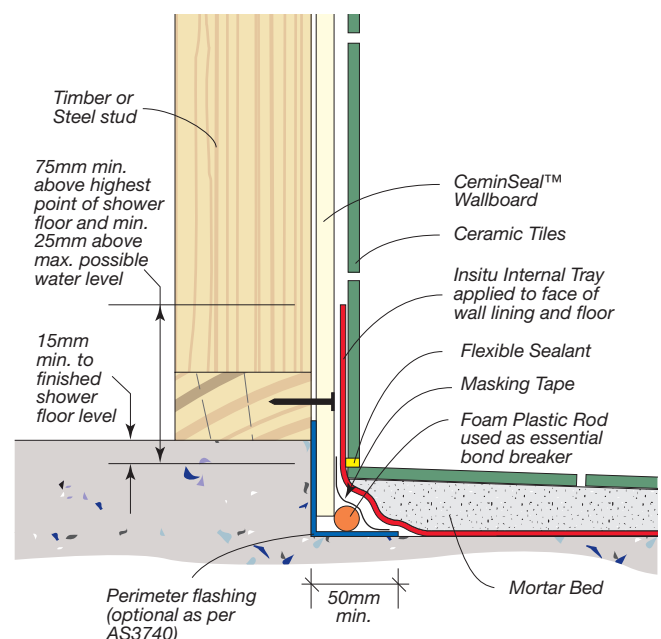


FIG 18: Insitu Internal Tray Shower Recess (Ceramic Tiled) For Set-Down Slab



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 CeminSeal™ 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 CeminSeal™ Wallboard and the floor. Refer to FIG 19.

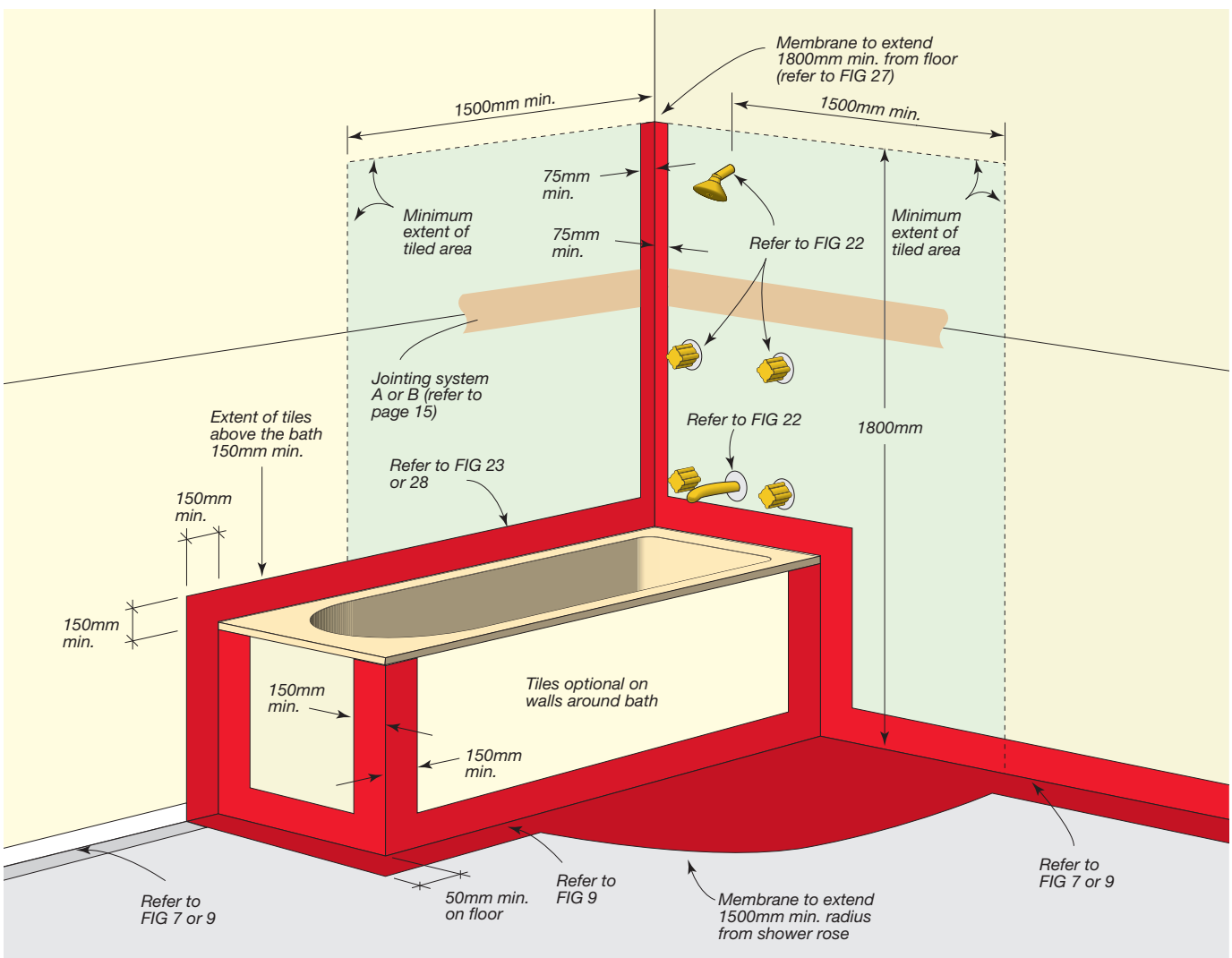
Always follow respective manufacturers' instructions.

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.

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

Important: Use only a proprietary impervious barrier assessed and classified in accordance with AS4858.

FIG 19: Installation Layout for a Shower Over Bath or Unenclosed Shower Area – Concrete or Compressed Fibre Cement Floor



BATH WITHOUT SHOWER

FIG 20: Installation Layout for a Bath Without Shower – Concrete Or Compressed Fibre Cement Floor

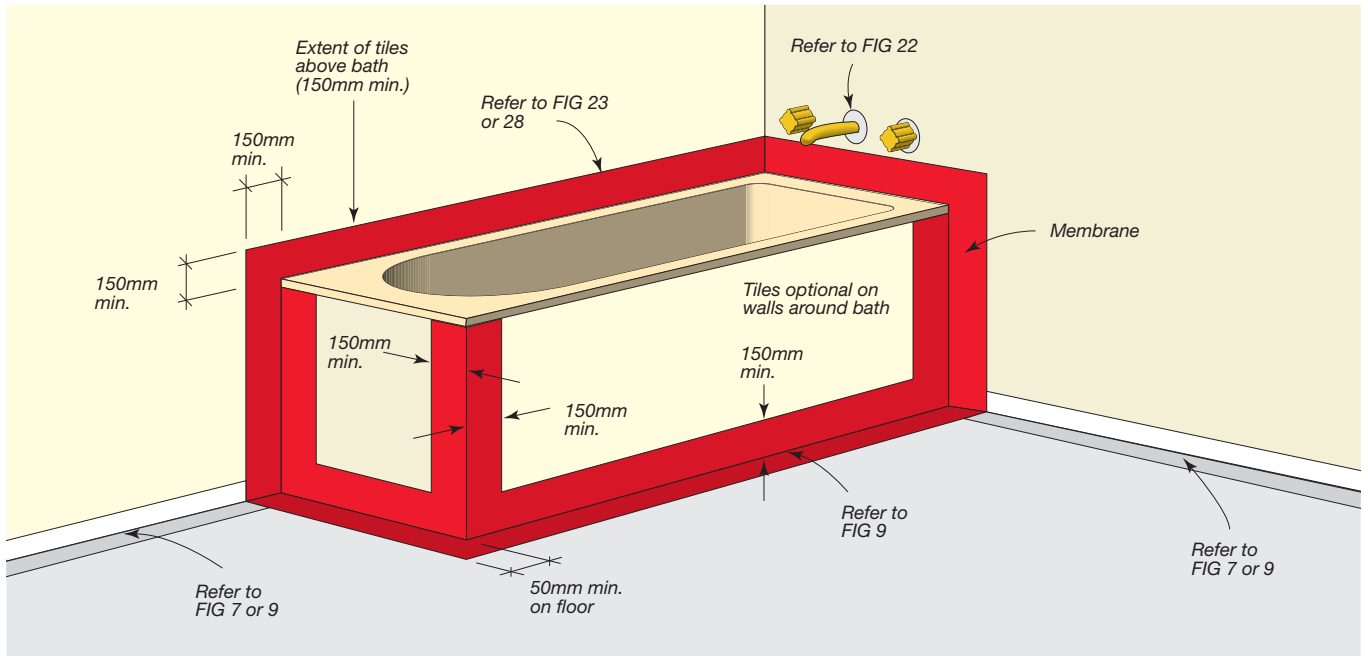


FIG 21: Typical Hand Basin Installation Detail

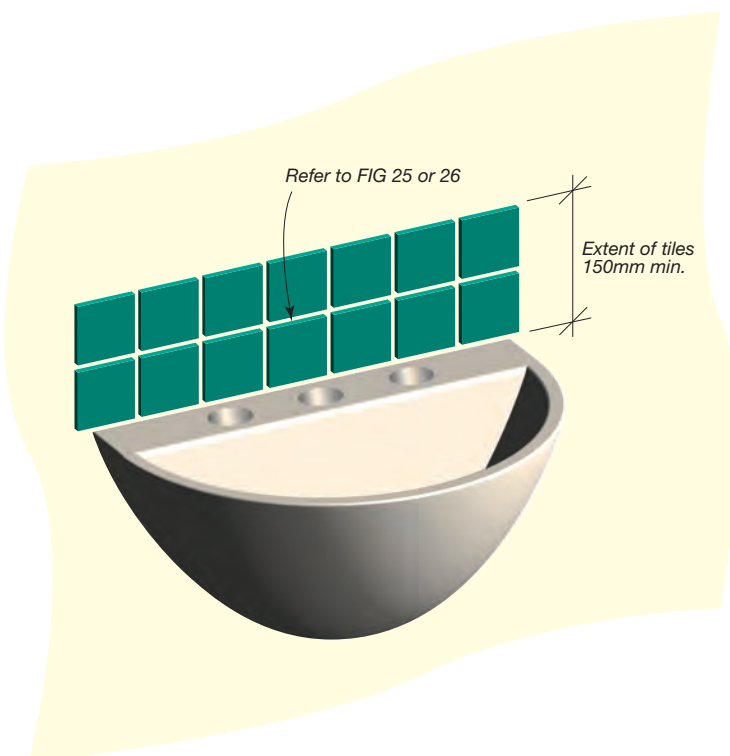


FIG 22: Tap Installation – Elevation

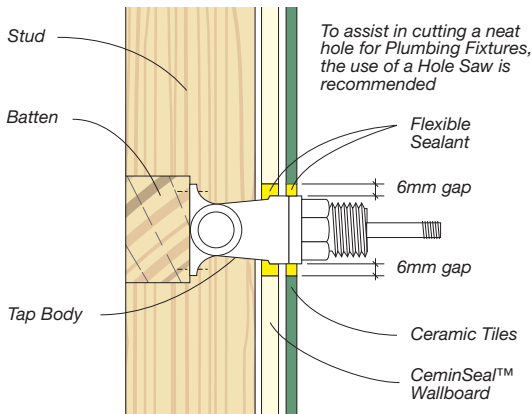


FIG 23: Bath Installation – Elevation

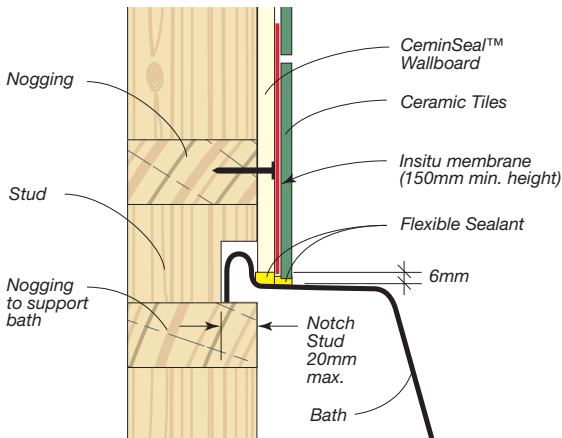


FIG 24: Laundry Tub/Basin Installation (Continuous Linings) – Elevation

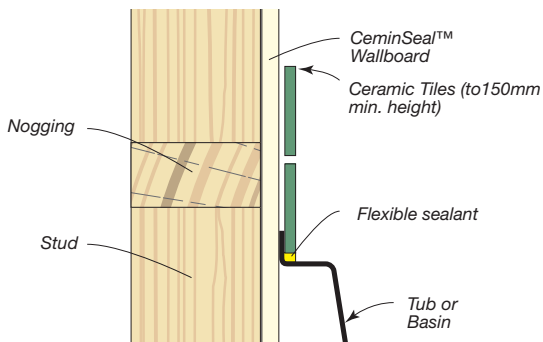


FIG 25: Alternative Tub/Basin Installation (Discontinuous Linings) – Elevation

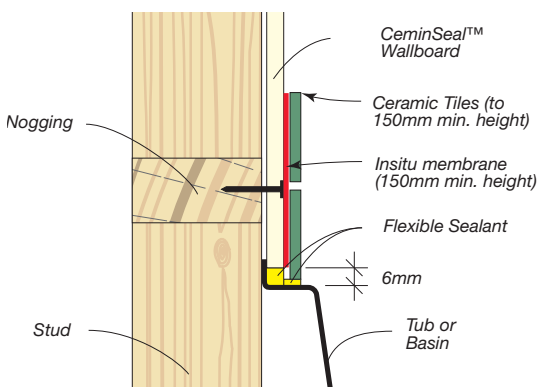


FIG 26: Vertical PVC Angle Flashing at Internal Corner of Shower or Shower Over Bath – Plan

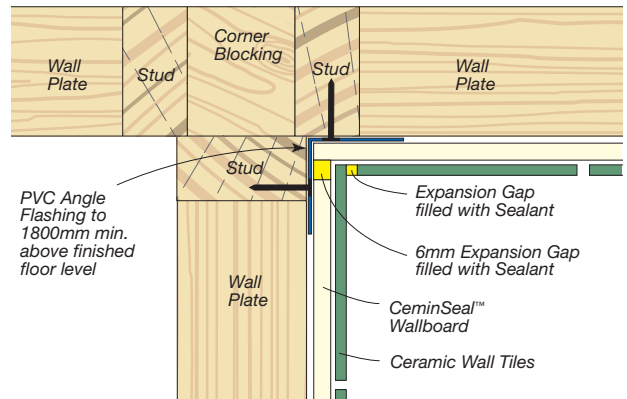


FIG 27: Insitu-Membrane Flashing at Internal Corner of Shower or Shower Over Bath – Plan

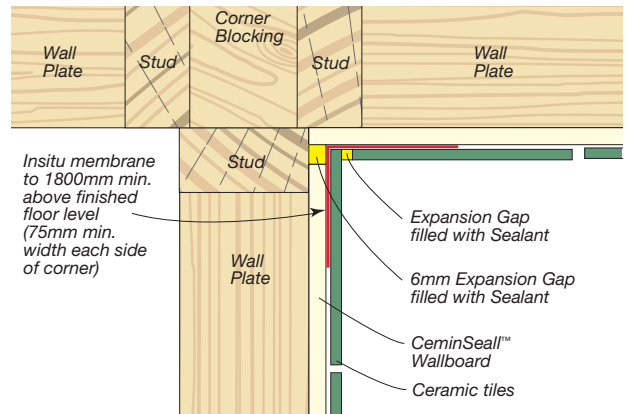
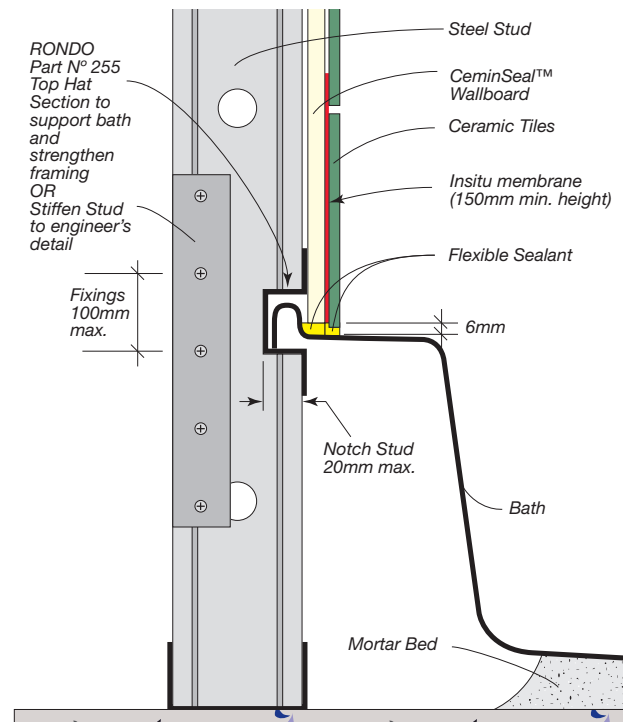


FIG 28: Bath Installation – Steel Stud Wall – Elevation



JOINTING SYSTEMS

After fixing CeminSeal™ 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
Tiled Areas and Water Resistant Areas¹				
A	Wet Area Base Coat	Paper Tape	Wet Area Base Coat	None
B	Wet Area Base Coat	Easytape™	Wet Area Base Coat	
Non-Tiled Areas and General Wet Areas				
C	Base Coat 45 ²	Paper Tape	Base Coat 45 ²	Jointmaster Topping Coat or Easy Flow or Total Coat-Lite or Prolite Topping Compound or Easy Finish
D	Easy Flow	Paper Tap	Easy Flow	
E	Total Coat-Lite	Paper Tape	Total Coat-Lite	

Note:

1. Water Resistant Areas are defined in AS3740 'Waterproofing of wet areas within buildings'. It is recommended that a water resistant taping compound, such as CSR Gyprock™ Wet Area Base Coat be used in these areas.
2. When using Basecoat 45 in hot or extreme drying conditions, mix only small quantities of compound. Leave the compound standing for approximately 15 minutes to ensure that it sets soon after application to the joints. Additionally, depending on the severity of the drying conditions, the surface of the area may be wetted with a brush before applying the compound. Do not use Base Coat when temperature is below 10°C.

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. 45 minutes.

Setting type compounds are: BASE COAT 45.

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 some movement without displaying weak joints.

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™ Paper Tape has been developed to enable the preparation of strong joints and should be used on butt and recess joints as detailed in Table 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 weak joints.



TILED AREAS

JOINTING OF RECESSED EDGES – SYSTEM A OR B ONLY (BUTT JOINTS SIMILAR)

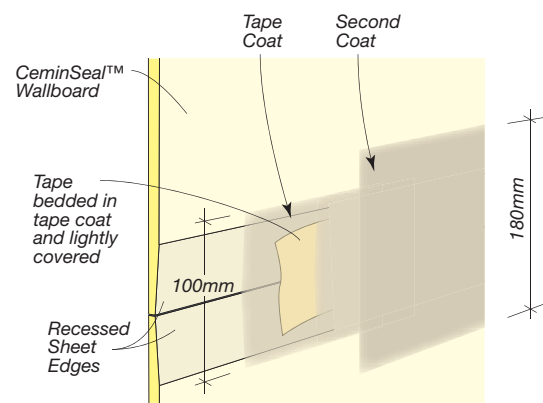
Tape Coat

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: Jointing Recessed Edge – Tiled Areas



TILED AREAS JOINTING OF EXTERNAL CORNERS

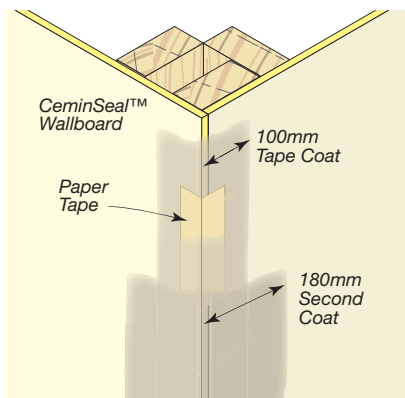
Tape Coat

1. Apply a thin 100mm wide coat of Wet Area Base Coat each side of the corner.
2. Bed in the tape centrally over the corner, and cover lightly with Wet Area Base Coat. Feather edges.
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 each side of corner. 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

FIG 30: Finishing External Corner – Tiled Area

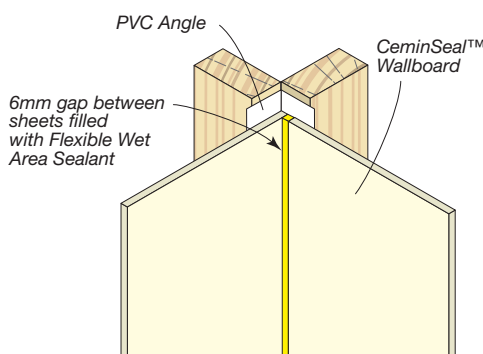


TILED AREAS – INTERNAL CORNERS

Important: Do not tape and set internal corner in tiled area. Refer to FIG 26, 27 and 31.

Above the tile line, tape and set the joint as shown for non-tiled areas. Refer to FIG 35.

FIG 31: Finishing Internal Corner – Tiled Area



NON-TILED AREAS

JOINTING OF RECESSED EDGES (SYSTEMS C, D, E)

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

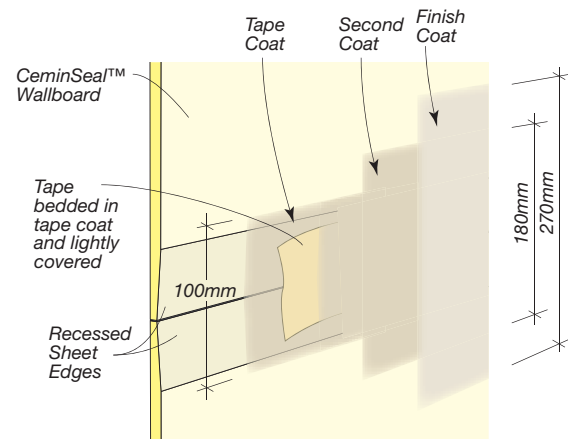
1. Apply a finish coat centrally over the second coat, about 270mm width. Feather the edges with a trowel. (If required, soften the outer edges of the compound with a damp water brush before feathering).
2. Cover fastener heads with a finish coat, extending beyond the second coat by about 25mm. Ensure 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 32: Recessed Edge – Non-Tiled Areas



NON-TILED AREAS – JOINTING OF BUTT JOINTS (SYSTEMS C, D, E)

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

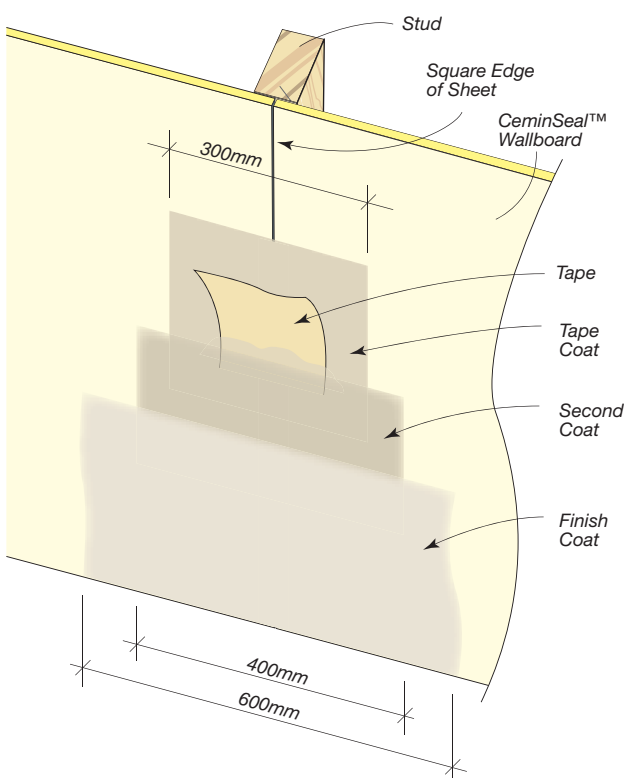
1. Apply a finish coat centrally over the previous coat to form an even camber over the joint about 300mm width each side of the joint. Feather the edges with a trowel. (If required, soften the outer edges of the compound with a damp water brush before feathering).
2. Allow compound to set/completely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

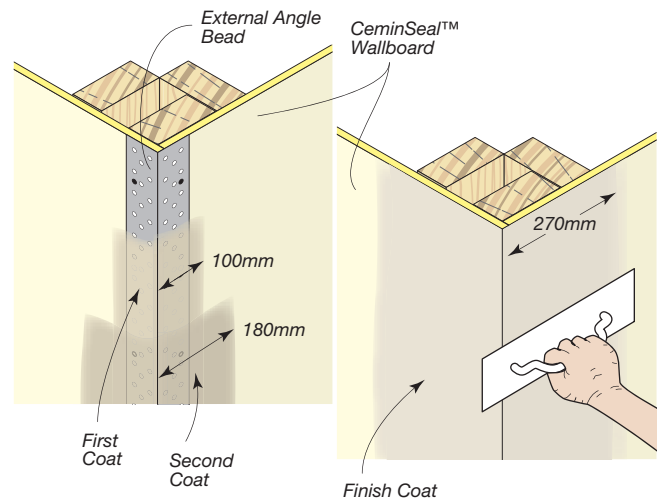
FIG 33: Butt Joint – Non-Tiled Areas



NON-TILED AREAS JOINTING OF EXTERNAL CORNERS

1. Position external angle bead over the corner and sight it to ensure straightness before fixing both legs with fasteners at 500mm maximum centres.
2. External angle beads are to be jointed with a three coat system as specified in Table 1 (excluding tape), and procedure similar to details for recessed joints in non-tiled areas.

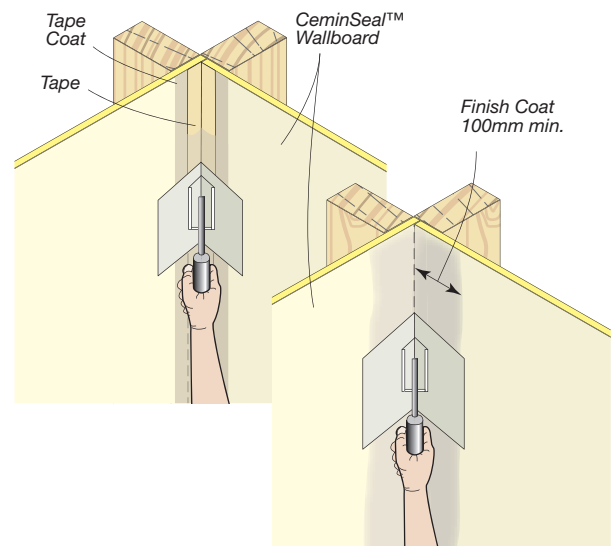
FIG 34: External Corner – Non-Tiled Areas



NON-TILED AREAS JOINTING OF INTERNAL CORNERS

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 35: Internal Corners – 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 CeminSeal™ Wallboard in those areas must be finished with ceramic tiles.

Other areas must be painted or wallpapered.

PAINTING

For best results, the surface of CeminSeal™ 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 CeminSeal™ 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.

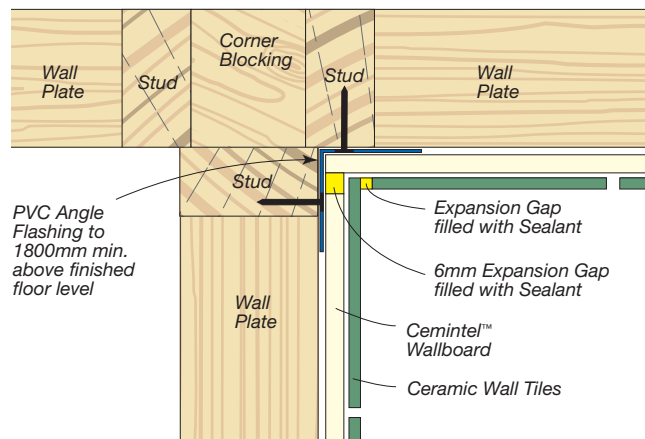
The tiler must ensure that all loose dust and foreign matter are cleaned off the surfaces to be tiled.

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

Tiling is to be in accordance with the tile adhesive manufacturer's instructions. Priming of joints and/or board may be required. A compatible tile adhesive must be used to fix tiles to proprietary membranes.

Spread adhesive 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.

FIG 36: Provision for Expansion/Contraction at Tiled Internal Corners



CORNICE

Details for fixing cornice are given in GYP547, Gyprock Residential Installation Guide. When fixing cornice to fibre cement surfaces, Gyprock™ Masonry Adhesive is recommended.

COMPRESSED SHEET WET AREA FLOORING SYSTEM

DESCRIPTION

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

Cemintel™ Compressed Sheet is a compressed, autoclaved, cellulose fibre reinforced cement sheet.

Cemintel™ 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

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

MANUFACTURING PROPERTIES

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

FIRE RESISTANCE

In accordance with the Building Code of Australia, Part 3.7.1.2, Cemintel™ fibre cement sheets can be used wherever non-combustible material is required by the code.

Early Fire Hazard Indices for CeminSeal™ Wallboard are:

FIRE HAZARD INDICES

Ignitability	0
Spread of Flame	0
Heat Evolved	0
Smoke Developed	0
Group Number	1
Average Specific Extinction Area	<250m ² /kg

COMPONENTS

Cemintel™ 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	-	✓	✓	✓	-	✓

Note: * The following components are not supplied by CSR.

FASTENERS*

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



ACCESSORIES*

Flashing: Such as Sikadur™ Combiflex 150mm width.

Adhesive: MagaPoxy P1 - between sheets.
Fulaprene 303 - fixing PVC angle to floor.

Waterstop: Non-ferrous metal angle.

FRAMING

Cemintel™ 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 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.

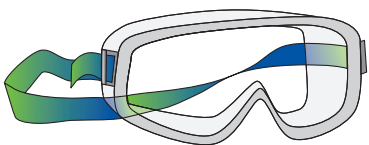
Wherever possible joist and sheet layout should be planned to ensure the long edges of compressed sheets are installed across the floor joists, and to ensure the end of the sheet is fixed on the centre line of the joist.

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.

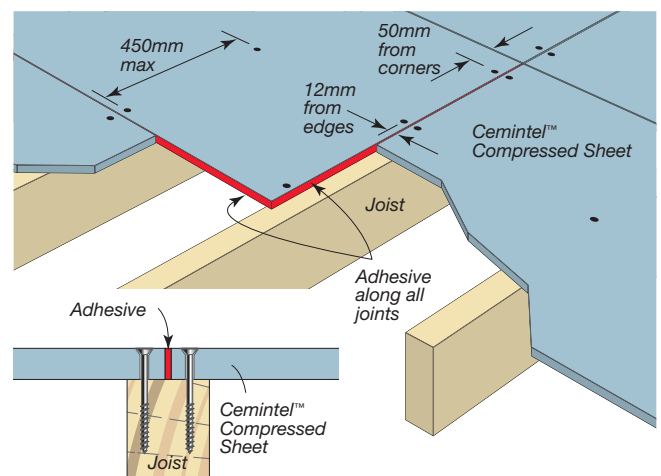
All sheet joints must be sealed using MegaPoxy P1, a two part water based epoxy adhesive, that must be mixed just prior to use. It is important to ensure sheet edges are clean and free of any dust.

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

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 37: 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.

Flashing Strip, 150mm wide, fixed to floor only using MegaPoxy P1.

Also refer to FIG 38, 39, 7, 8 and 9.

FIG 38: Perimeter Flashing

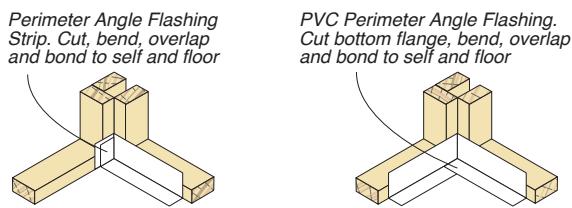
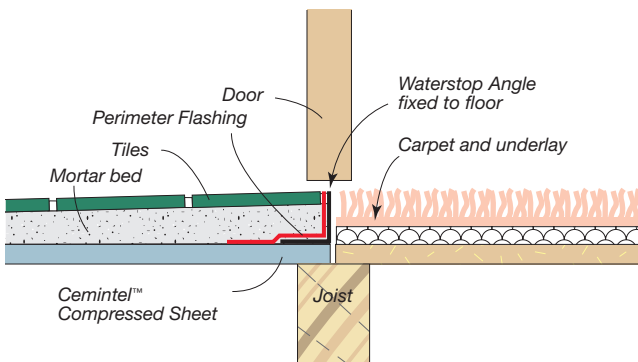


FIG 39: Doorway Flashing Detail



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 40 or 41.

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.

FIG 40: Shower Recess With Hob

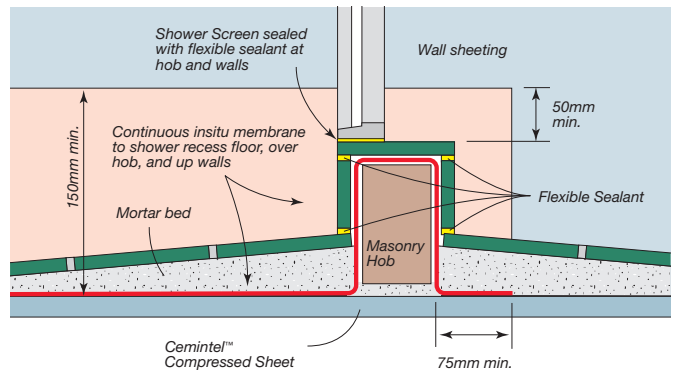
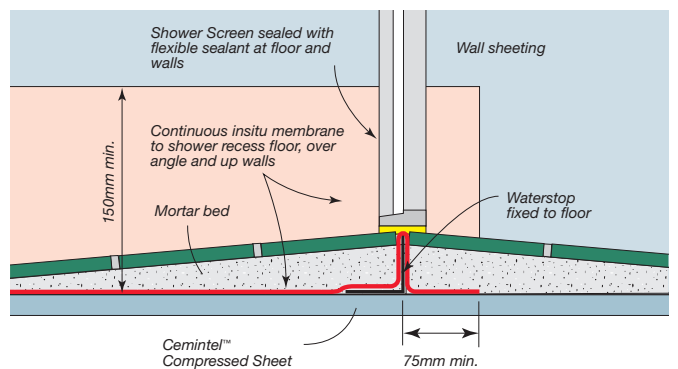


FIG 41: Hobless Shower Recess



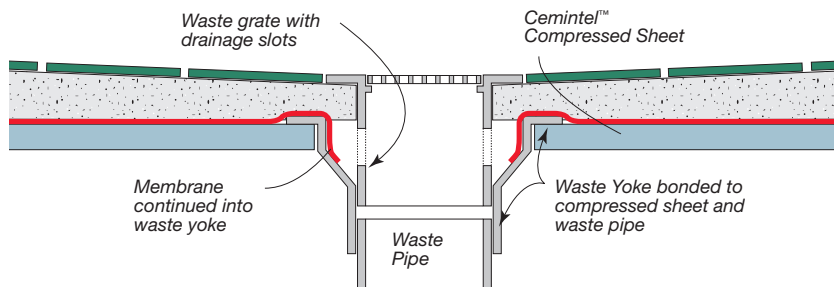
PLUMBING WASTES

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.

FIG 42: Waste Detail



TILE LAYING

If a fall to waste is not required, tiles may be fixed directly to Cemintel™ 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.



cemintel[™]
CREATE AND CONSTRUCT



Cemintel[™] is a trademark of CSR Limited

WWW.CEMINTEL.COM.AU

WET AREA SYSTEMS



FC:101

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.

MANUFACTURED FOR LIFE

CSR Building Products Limited ("CSR") warrants its CeminSeal[™] Wallboard ("Product") to remain free of defects in material and manufacture for the usual lifetime of the Product (up to 25 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 this technical manual. 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.

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

CSR will not be liable for any claims, defects or damages arising from or in any way attributable to poor design or detailing, poor workmanship, movement of materials to which the Product is attached and/or, incorrect design of the structure settlement or structural movement, high levels of pollution, acts of God including, but not limited to, floods, cyclones, earthquakes or other severe weather or unusual climatic conditions, 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.

To make a claim under this warranty, you must contact CSR on **1300 CEMINTEL**, or write to one of our state offices, www.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.

CONTACT DETAILS

APRIL 2016

CSR Cemintel[™] Sales Support

Tel: 13 17 44
Fax: 1800 646 364

CSR designLINK[®] Technical Support Service

Tel: 1800 621 117

New South Wales and ACT

376 Victoria Street,
Wetherill Park NSW 2164

Queensland

768 Boundary Road,
Coopers Plains QLD 4108

Victoria

277 Whitehall Street,
Yarraville VIC 3013

South Australia

Lot 100 Sharp Court,
Mawson Lakes SA 5095

Western Australia

19 Sheffield Road,
Welshpool WA 6106

Tasmania

PO Box 61,
Glenorchy TAS 7010

Northern Territory

Cnr Stuart Hwy & Angliss St,
Berrimah NT 0828