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CREATE AND CONSTRUCT

CSR CEMINTEL™

# CEMINTEL RENDALINE™

FC:945

EXTERNAL CLADDING SYSTEM

MARCH 2015

Cemintel Rendaline™ is a monolithic fibre cement facade system for commercial buildings. Combined with Cemintel™ Texture Coat, it provides a strong, durable weatherproof facade.

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# DESCRIPTION

The Cemintel Rendaline™ system is a complete external cladding system that incorporates all of the advantages of lightweight construction with a flush-jointed texture coat finish.

Rendaline™ provides a versatile and durable facade that is suitable for an extensive range of commercial and industrial buildings types. A highly adaptable system, it can be used over most common structural materials such as masonry, pre-cast concrete and steel or timber stud framing.

Cemintel Rendaline™ sheet is an autoclaved, cellulose fibre reinforced cement sheet. It is 8mm thick and has recesses on the long edges to facilitate concealed joint construction.

The sheets are supported by vertical top hats and fixed with countersunk screws. Rendaline™ preformed reveals and corners are available for fast installation to reduce on site labour.

Cemintel™ External Texture Coat is an integral part of the Rendaline™ system. It is applied to provide a seamless finish that is weatherproof, strong and durable.

# APPLICATIONS

The Cemintel Rendaline™ System is designed for commercial facades requiring a flush-jointed finish. It is ideal as a wall cladding for commercial and industrial buildings and for fascias and hoardings for buildings such as:

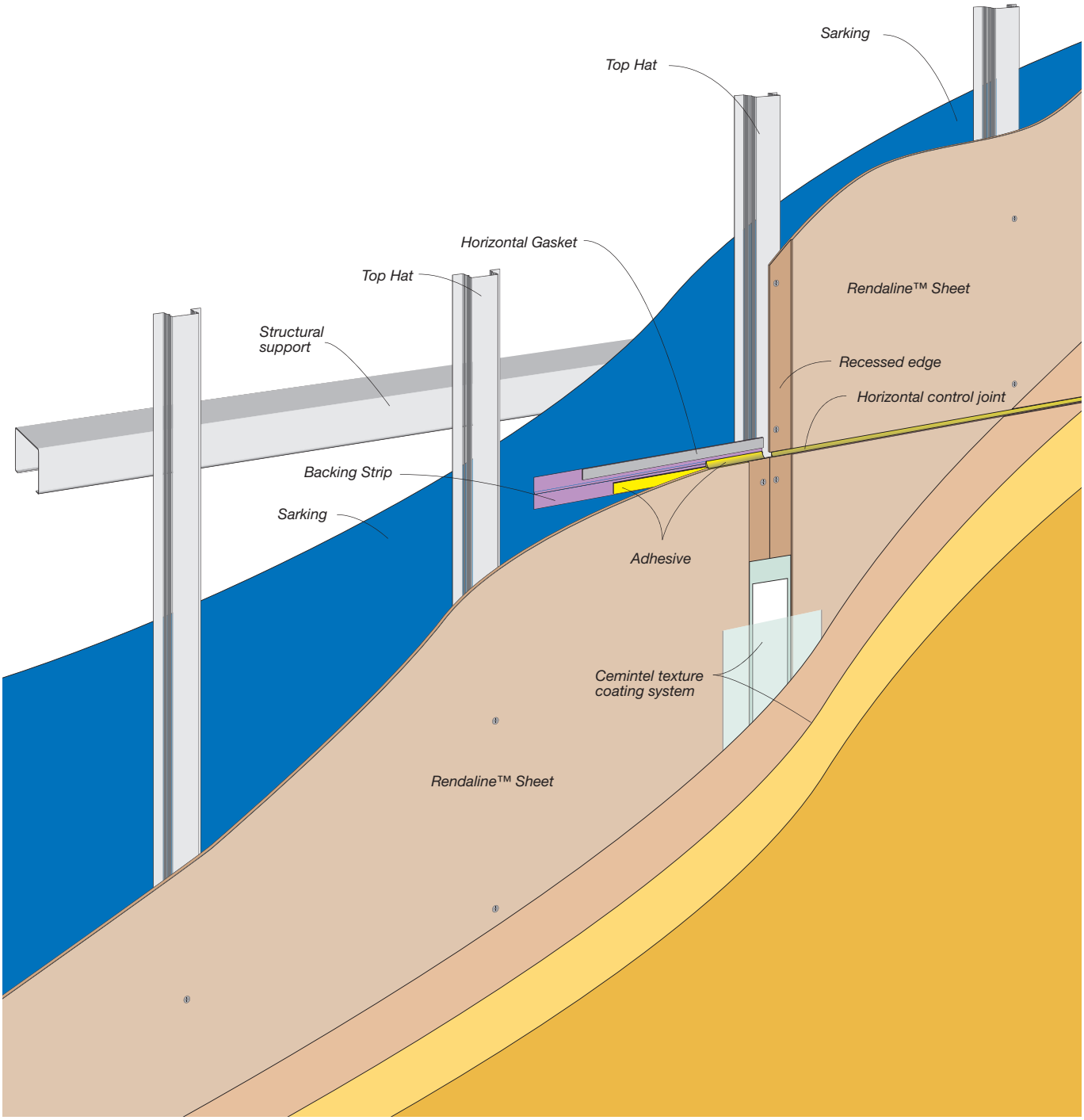
- Supermarkets and shopping centres
- Office buildings
- Residential homes and apartment buildings
- Warehouses

It remains the responsibility of the building designer to verify the Rendaline™ system is suitable for the particular requirements of any given project.

The Rendaline™ System has excellent resistance to water penetration and high wind loads, and is suitable for exposed applications in non-cyclonic wind zones.

# ADVANTAGES

- A complete system.
- Lightweight construction.
- Seamless finish with Cemintel™ Jointing and Coating System
- Accepts a wide range of colours.
- Drained cavity construction improves durability and building weatherproofing.
- Cost effective lightweight construction.
- Can be fire rated to 60 or 90 minutes.
- Simple steel components ensure fast and easy set out and assembly.
- Prefabricated reveal and corner profiles assist quick and easy installation and produce a high quality finish.



# COMPONENTS

## CEMINTEL™ RENDALINE SHEET

Cemintel Rendaline™ Sheet is an autoclaved, cellulose fibre reinforced cement sheet manufactured with recesses on the two long edges, and is light brown in colour for ready identification.

The sheets are sealed on the front face to minimise water absorption. Cemintel Rendaline™ Sheet conforms to the requirements of AS/NZS2908.2 'Cellulose-cement products Part 2: Flat sheets'

Cemintel Rendaline™ Sheets are available in the following range of sizes.

| Sheet Length (mm) | 8.0 mm Thickness |
|---|---|
| | Width |
| | 1200 |
| 2400 | ✓ |
| 2725 | ✓ |
| 3000 | ✓ |

## MANUFACTURING TOLERANCES

| | |
|---|---|
| Thickness (nominal) | 8.0mm |
| Mass (nominal) | 11.7kg/m2 |
| Length | +0 to -4mm |
| Width | +0 to -3mm |
| Thickness | +.5 to -0mm |
| Diagonals (difference max.) | 3mm |

## FIRE RESISTANCE

Under the Building Code of Australia, Part 3.7.1.2, Cemintel™ Fibre Cement can be used wherever non-combustible material is required. When tested in accordance with AS1530.3, the Early Fire Hazard Indices are as follows:

## EARLY FIRE HAZARD INDICES

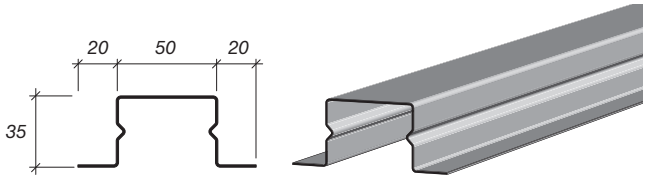
| Cemintel™ Product | EFHI | SMOGRArc | Group Number |
|---|---|---|---|
| Cemintel™ RendaLine | 0/0/0/0 | 0 | 1 |

Note: EFHI = Early Fire Hazard Indices (Ignitability / Spread of Flame / Heat Evolved / Smoke Developed)
SMOGRA$_{RC}$ = Smoke Growth Rate Index

## 0.75mm BMT INTERMEDIATE TOP HAT

Used to support the Rendaline™ sheet at vertical joints and at intermediate locations. 0.75mm Intermediate Top Hat is manufactured from galvanised (Z275) Blue Scope steel of 0.75mm base metal thickness, and has a mass of 0.95kg/m.

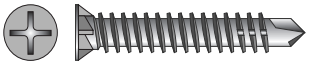
| Order N° | Qty |
|---|---|
| 39376 | 3000mm |




## SCREWS FOR FIXING CEMINTEL RENDALINE™ SHEET TO TOP HATS

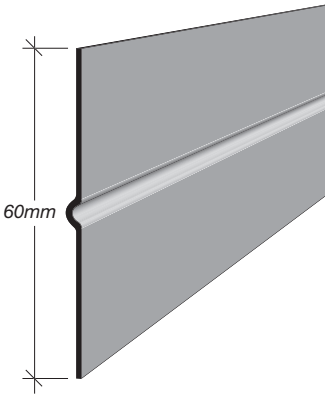
Buildex FibreZIPS™, 9-18 x 30mm Class 3 finish. For steel framing of 0.42 to 0.75mm BMT. Suitable for coastal areas.

| Order N° | Qty |
|---|---|
| 13165 | 1000 |



## HORIZONTAL JOINT BACKING STRIP

Horizontal Joint Backing Strip is a rolled steel section designed to support the gasket and/or sealant behind the horizontal control joints. Horizontal Backing Strip is manufactured from high tensile Blue Scope Colorbond steel, and is black in colour.




| Order N° | Qty |
|---|---|
| 21089 | 1194mm |
| 21088 | 2394mm |
| 21087 | 2994mm |

## BACKING STRIP ADHESIVE

An adhesive is used for fixing the Horizontal Backing Strip to the Rendaline™ sheet. The recommended product is Sikaflex®-11FC. This product is not recommended for filling expressed joints.

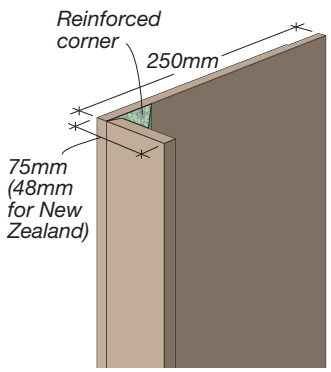
| Order N° | Qty |
|---|---|
| 39378 | Sikaflex® 11FC, 310ml tube |

## CEMINTEL RENDALINE™ REVEAL, CORNER & SILL PROFILES

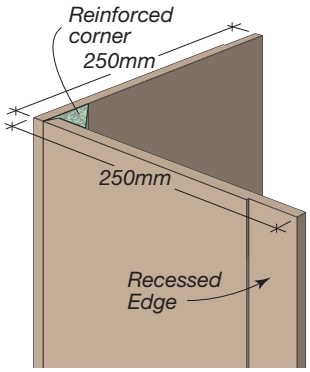
Cemintel Rendaline™ Reveal, Corner and Sill are preformed profiles which enable easier construction and finishing of recessed window and door openings, and external corners. Prefabricated from Cemintel Rendaline™ Sheet bonded with polyurethane foam which produces strong and durable profiles, ready for installation. Profiles have recessed edges where appropriate.

| Description | Order N° | Length |
|---|---|---|
| Reveal | 11351 | 3000mm |
| Corner | 11349 | 3000mm |
| Contemporary Sill | 11354 | 3000mm |

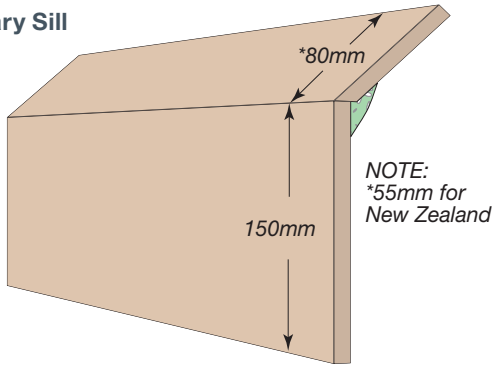
**Reveal**




**Corner**



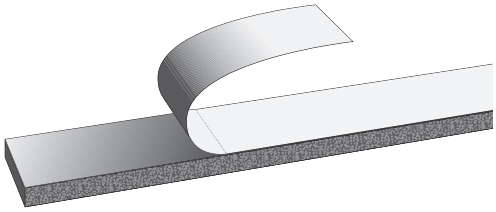

**Contemporary Sill**




## HORIZONTAL JOINT GASKET

Horizontal Joint Gasket is made from closed cell PVC Nitrile foam which has a high resistance to abrasion and maintains its properties at high temperatures. The gasket has adhesive on one side (with a release paper), and is adhered to the Horizontal Backing Strip to prevent moisture entry at horizontal joints.

| Order N° | Qty |
|---|---|
| 22105 | 3.0 x 18 x 9000mm roll (Tesa 50601) |



## BACKING ROD

Backing rod is used to enable correct filling of joints with sealant. It is recommended that backing rod be of open cell type to enable sealant to cure from behind. The diameter of backing rod must be appropriate for the width of the gap being filled.

| Order N° | Qty |
|---|---|
| 11177 | 50m |

## BOND BREAKER TAPE

Tesa Multifoam Tape 7492. 48 x 3mm polyethylene closed cell foam tape for control joints.

| Order N° | Qty |
|---|---|
| 13172 | 1 Roll x 25mm |

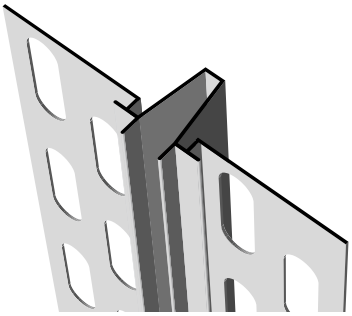
## FLEXIBLE SEALANT

Sikaflex® PRO polyurethane joint sealant for filling control joints and gaps around window.

| Order N° | Qty |
|---|---|
| 11378 | 310ml Tube (Gray) |
| 39488 | 310ml Tube (Black) |

## TRIM-TEX PVC CONTROL JOINT

Trim-Tex PVC Control Joint (72-093V™) PVC moulding for use at vertical and horizontal control joints. Flanges act as a trowel guide and tear off strips prevent filling of the joint during texture coating.



| Order N° | Qty |
|---|---|
| 10350 | 3000mm |

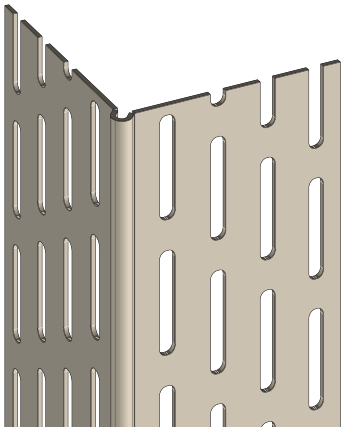
## RONDO E817

For use at edges around windows or door frames, the base of walls and where one wall intersects another. Corrosion resistant with a grey powder coat finish.

| Order N° | Qty |
|---|---|
| 60455 | 3.0m |

## TRIM-TEX SKIM COAT CORNER BEAD

Slotted PVC bead with UV stabilised coating. Used to reinforce external corners.

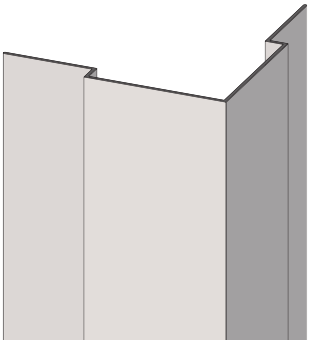


| Order N° | Qty |
|---|---|
| 12254 | 3000mm |

## PVC CORNER MOULD

A weather resistant corner angle that can be installed as an option for corner construction.

| Order N° | Length |
|---|---|



| | |
|---|---|
| 39377 | 3000mm |

## FLASHINGS & CAPPINGS*

Flashings are to be designed and installed in accordance with SAA-HB39 1997 and good building practice.

## SARKING*

A range of sarkings are available to suit various environments. Please contact CSR Bradford for additional information.

## BACKING STRIPS AND ANGLES*

Backing strips and corner support angles are to be formed from minimum 0.75mm BMT galvanised steel

## JOINTING TAPE

Cemintel™ Jointing Tape is a 50mm wide non-perforated PVC strip. It is used to create a strong joint at the recessed edges of the Rendaline™ Sheets.


| Order N° | Qty |
|---|---|
| 38314 | 1 Roll x 50m |

NOTE: Products marked with * are supplied by others.

## CEMINTEL™ EXTERNAL JOINTING COMPOUND

A smooth, acrylic drying type compound that will provide a strong joint. It is used at external corners and, with Cemintel™ External Jointing Tape, in the recess joints of the Rendaline™ Sheet. Available in a 15kg bucket.


| Order N° | Qty |
|---|---|
| 38562 | 15Kg |

## CEMINTEL™ SKIM COAT


An acrylic drying type compound designed to remove imperfections around joints and fixings. It provides an evenly sealed surface for the subsequent Texture Coat. Available in a 20kg bucket.

| Order N° | Qty |
|---|---|
| 38197 | 20Kg |

## CEMINTEL™ TEXTURE COAT

A white, high build acrylic coating. It is designed to deliver a 'rendered look' to fibre cement monolithic facades. Available in a 20kg bucket.


| Order N° | Qty |
|---|---|
| 38198 | 20Kg |

## HYDE JOINTING KNIFE

Stainless steel 150mm trowel for applying the External Jointing Compound.


| Order N° | Qty |
|---|---|
| 11017 | 1 |

## RAGNI TROWEL

Stainless steel 280mm trowel for applying Skim Coat and Texture Coat.


| Order N° | Qty |
|---|---|
| 11056 | 1 |

## PURACLENE TROWEL

Polypropylene finishing float used to remove trowel marks and create a uniform texture.

| Order N° | Qty |
|---|---|
| 13073 | 1 |

# DESIGN CONSIDERATIONS

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

## HIGH WIND LOADS

Wind loads in this guide refer to 'Ultimate Limit State Design Wind Pressures'. In areas where the design wind pressures exceed 4.5kPa, contact CSR Cemintel Fibre Cement for additional system options.

## SARKING

Wind forces can produce lower air pressures within buildings than on the outside, assisting to force water through gaps in the building envelope such as around penetrations and at joint locations, even at low wind speeds.

A vapour permeable wall wrap is recommended between the timber frame and Cemintel Rendaline™ sheet. CSR Bradford Enviroseal, products are recommended. If the wall is not exposed directly to the weather and will not get wet, sarking is only required for insulation and condensation control.

The sarking should be placed between the top hats and the framing. Sarking must be designed and installed in accordance with AS/NZS 4200 Part 1: Materials, and Part 2: Installation.

Condensation is a complex problem, and can occur under a variety of conditions, not just cold weather. Literature on this subject is available from CSIRO/BRANZ/ASHRAE and should be consulted when building in areas where condensation is likely to occur.

In these cases, the appropriate use of a sarking as a vapour barrier or as thermal insulation, or both, can be effective in controlling condensation.

## COLD CLIMATES

In cold climates where condensation in the wall cavity is possible, a vapour barrier is also recommended between any internal linings and the framing.

Rendaline™, sheet is not designed to be in contact with snow or ice build-up for extended periods, such as is experienced in alpine areas subject to snowdrifts.

## INSULATION

It is recommended that insulation materials be installed for energy conservation and occupant comfort. Insulation also improves the acoustic performance of the wall against outside noise.

The level of insulation provided in a wall is described by its R-value. The higher the R-value the greater the insulation provided. A Cemintel Rendaline™ System incorporating Bradford R1.5 Gold batts insulation can provide a thermal rating of R1.9, which is higher than many masonry systems.

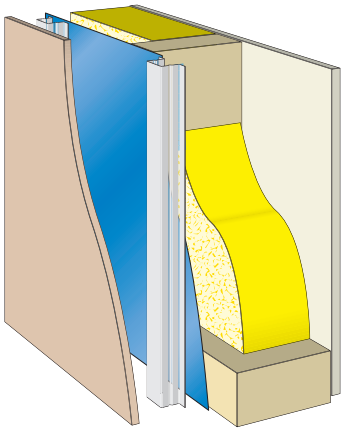
Where occupant comfort is a consideration, the minimum recommendation is a reflective foil fixed to the outside of the frame prior to installing the top hats.

Where greater thermal insulation properties are required, it is recommended that CSR Bradford wall insulation be installed in the wall framing. Check with local building regulations for minimum insulation requirements.

SYSTEM SPECIFICATION

- 1 layer Cemintel Rendaline™ Sheet to the outside of battens.
- Timber or Steel Studs (90mm) at 600mm maximum centres.
- 1 layer x 10mm GYPROCK® Plasterboard CD to the inside of framing.

| INSULATION MATERIALS | Total Wall R-Value |
|---|---|
| (a) Bradford EnviroSeal Wall Breather LD under top hats. | 1.00 |
| (b) Bradford EnviroSeal Wall Breather LD under top hats + Bradford R1.5 Gold batts in cavity. | 1.90 |



## COASTAL AREAS

The Rendaline™ system may be used in coastal areas more than 300m from a surf beach, or more than 200m from a shore without breaking surf.

Consideration must also be given to local weather and topographical features that can cause an increase in the distance that salt spray can travel beyond these limits.

To resist corrosion in these areas, salt laden air must be excluded from the cavity, for instance by lapping and sealing the flashing at corners and joins. Salt laden air must also be excluded from entering the rest of the building envelope, such as the roof space, etc.

All walls must be sufficiently exposed from above so that rain can perform natural wash down of the wall. Walls that are protected by soffits above must be washed down twice per year, to remove salt build-up.

Ensure the correct fasteners are used. Refer to 'Components'. Prior to the application of the external coating, wash down walls with clean fresh water to remove salt spray build-up from sheets and fixings. Sheets must be allowed to dry before coating.

## MAINTENANCE

The durability of the Rendaline™, system can be improved by periodic inspection and maintenance. Inspections should include examination of the coatings, flashings and seals.

Paint finishes must be maintained in accordance with the manufacturer's recommendations.

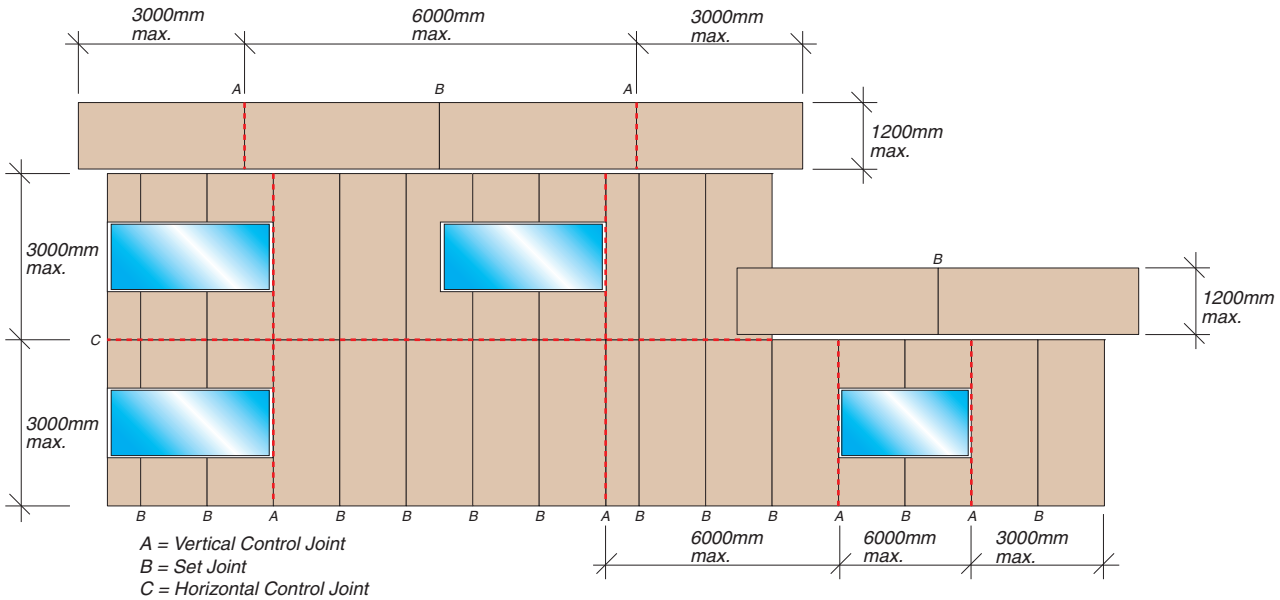
Any cracked or damaged finish or seals that would allow water ingress must be repaired immediately by re-coating or resealing the effected area. Any damaged flashings or sheets must be replaced as for new work.

The durability of the system can also be increased by the additional treatment of steelwork, and by painting all exposed sealants to the sealant manufacturer's recommendations.

## VERTICAL CONTROL JOINTS

Vertical control joints must be provided in walls at 6m maximum spacings, at 3m maximum from external corners, and to coincide with any control joints provided in the structure. Control joints must be constructed in accordance with FIG 1 or 2.

**FIG 1: Typical Panel Layout**



Where sheet joints coincide with the edge of an opening, provide a vertical control joint. Refer to FIG 2.

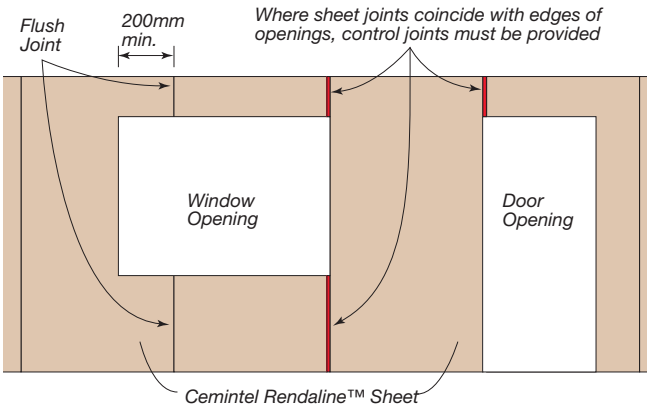
A control joint must also be installed at an intersection of a Rendaline™ wall with a wall of different structural framing or cladding, to allow for differential movement.

## HORIZONTAL CONTROL JOINTS

To allow for movement of the structural frame and sheets, a horizontal control joint must be installed at every floor level and at 3m maximum centres. Refer to FIG 1.

For best results, control joints should be filled with sealant after the texture coat has been applied.

**FIG 2: Joints Coinciding with Openings**




# FRAMING

## STRUCTURAL SUPPORT

Cemintel Rendaline™ facade can be used over most structural framing systems, including horizontal girts, timber and steel studs, concrete panels and masonry walls.

When fixing to timber or steel studs, the frame must be designed to support the top hats at the top and bottom of the wall, and at noggings within the span of the wall. The connection of the nogging to the frame usually requires special design.

AS/NZS1170.0 Table 1 suggests that support framing be designed for a maximum deflection of span/250.

The structural framing, and the connection of top hats to the framing, must be designed by the project structural engineer.

**FIG 3: Fixing to Structural Steel Framing**

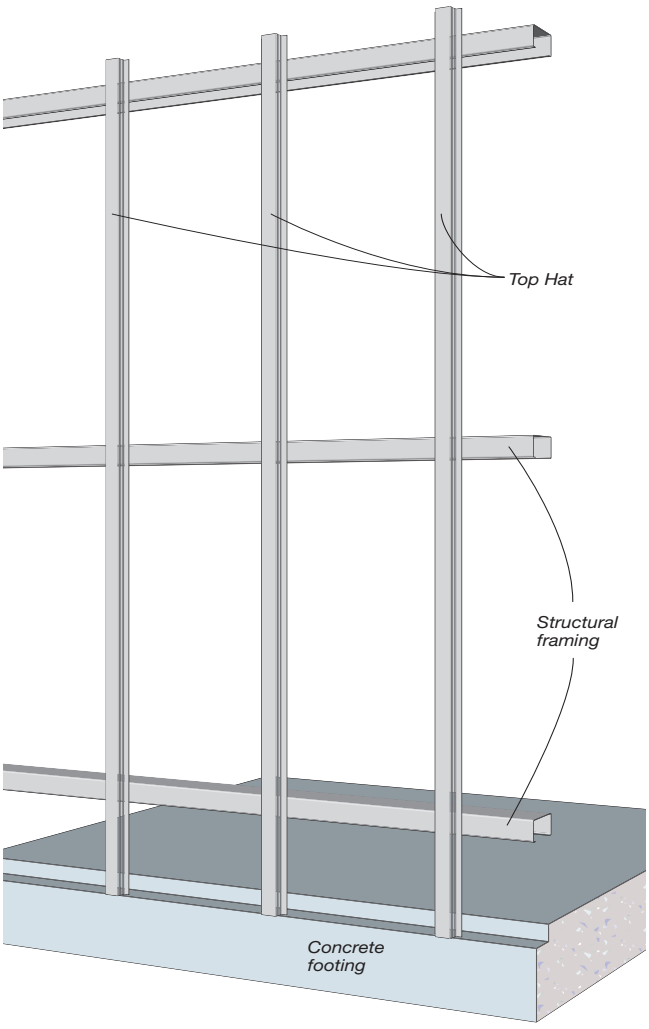
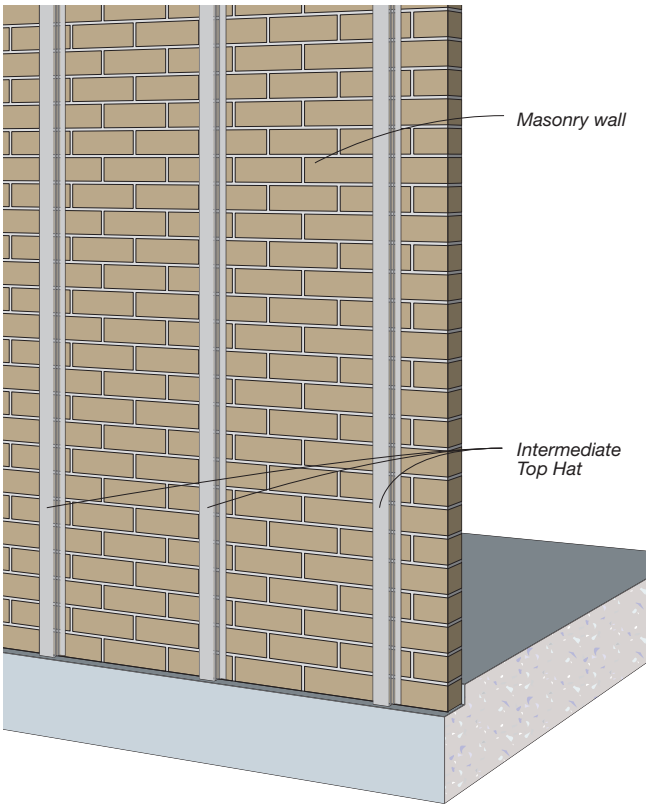


**FIG 4. Fixing to existing masonry wall**




## TOP HATS

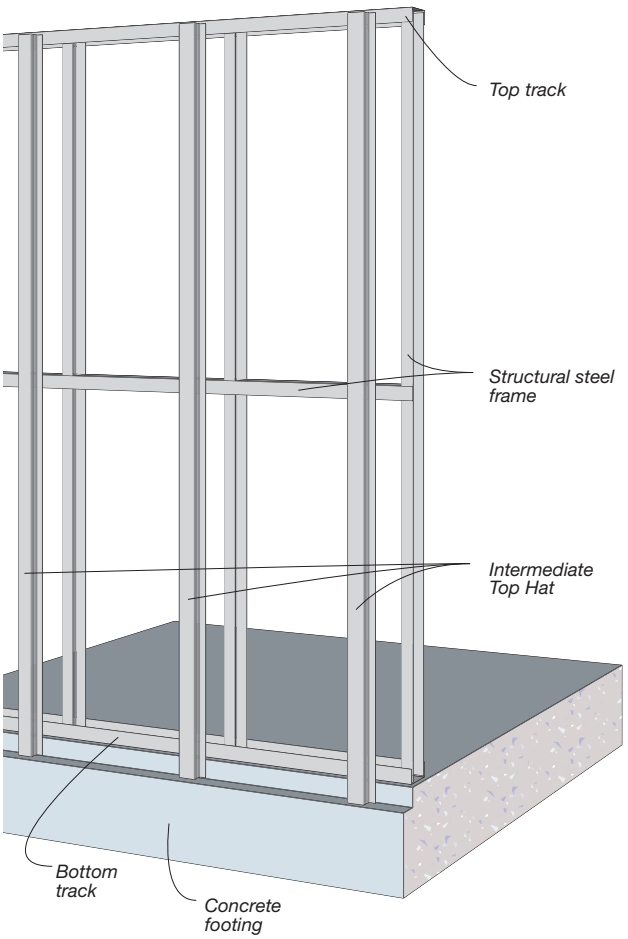
The design capacities of the Rendaline™, system are in limit state format and intended for use with AS/NZS1170.2. The system is suitable for non-cyclonic wind zones, Regions A and B.

The top hat capacities in Table 1 and Table 2 have been calculated in accordance with AS4600: Cold Formed Steel Structures. The deflection of the top hats as detailed in Table 1 and Table 2 is no more than span/250 when subjected to serviceability wind loads of 66% of ultimate wind loads.

Top hat are to be installed vertically, with span and spacing in accordance with Tables 1 and 2.

Top hats must be placed at no more than 100mm from sheet ends, including at vertical control joints, windows and doors. Refer to FIG 15. Additional horizontal framing angles may be used top and bottom of each wall to support flashings, or to provide impact resistance in accessible areas.

**FIG 5. Fixing to Steel or Timber Stud Framing**




## TOP HAT FIXING

NOTE: It is the responsibility of the project engineer to specify the connection of the top hats to the support structure. Each fastener is required to have a minimum 14mm diameter head, such as a 12g hex head screw, for satisfactory top hat performance.

**FIG 6: Top Hat Fixing**

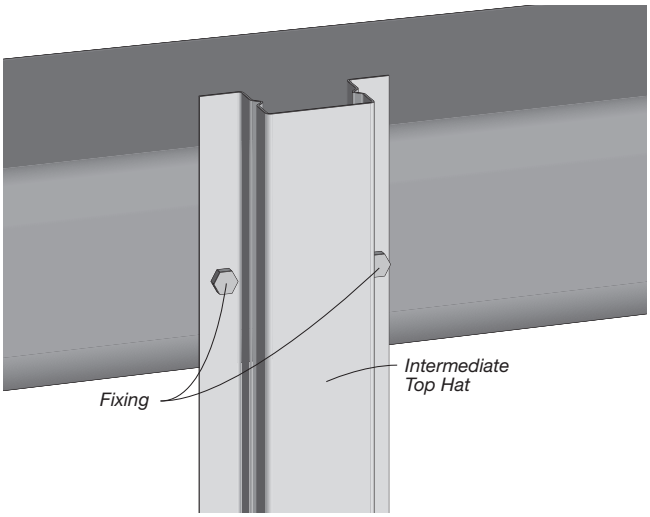
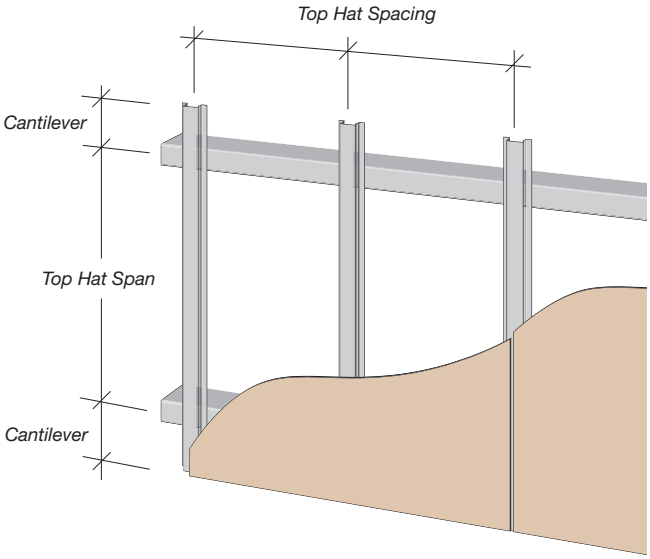
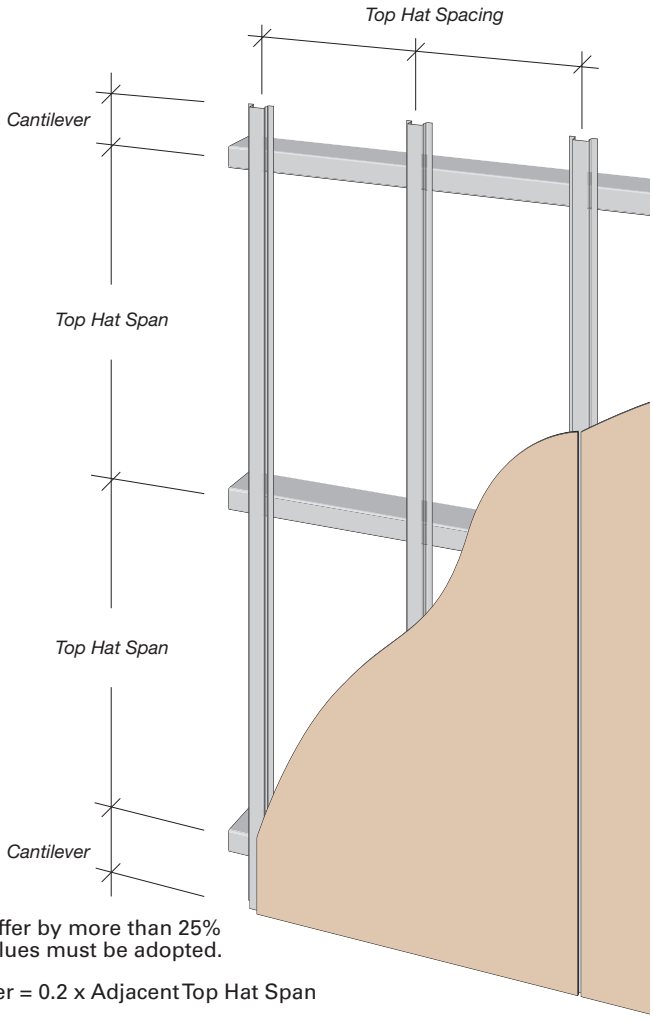


**FIG 7: Single Span Installation**




Maximum Cantilever = 0.2 x Adjacent Top Hat Span

**FIG 8: Double Span Installation**




If adjacent spans differ by more than 25% then single span values must be adopted.

Maximum Cantilever = 0.2 x Adjacent Top Hat Span

**Table 1: Maximum Top Hat Vertical Span (mm) - Single Span Installation**

| Ultimate Design Wind Pressure (kPa) | 300mm Top Hat Spacing | 400mm Top Hat Spacing | 450mm Top Hat Spacing | 600mm Top Hat Spacing |
|---|---|---|---|---|
| 1.0 | 1350 | 1200 | 1200 | 1100 |
| 1.5 | 1200 | 1100 | 1050 | N/A |
| 2.0 | 1100 | 1000 | 950 | N/A |
| 2.5 | 1000 | 950 | 900 | N/A |
| 3.0 | 950 | 900 | 850 | N/A |
| 3.5 | 900 | 850 | N/A | N/A |
| 4.0 | 900 | 800 | N/A | N/A |
| 4.5 | 850 | 800 | N/A | N/A |

**Table 2: Maximum Top Hat Vertical Span (mm) - Double Span Installation**

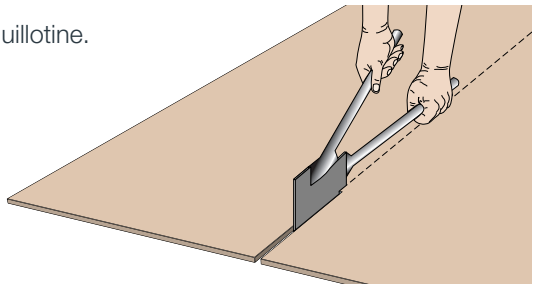
| Ultimate Design Wind Pressure (kPa) | 300mm Top Hat Spacing | 400mm Top Hat Spacing | 450mm Top Hat Spacing | 600mm Top Hat Spacing |
|---|---|---|---|---|
| 1.0 | 1800 | 1650 | 1600 | 1450 |
| 1.5 | 1600 | 1450 | 1450 | N/A |
| 2.0 | 1450 | 1350 | 1300 | N/A |
| 2.5 | 1350 | 1250 | 1200 | N/A |
| 3.0 | 1300 | 1150 | 1100 | N/A |
| 3.5 | 1250 | 1050 | N/A | N/A |
| 4.0 | 1150 | 1000 | N/A | N/A |
| 4.5 | 1100 | 950 | N/A | N/A |

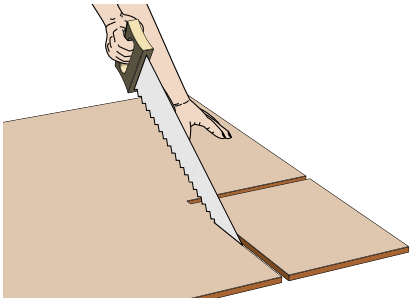
# SHEET PREPARATION

## CUTTING

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

1. Hand Guillotine.





2. 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.

3. Power Saw.

When it is necessary to use power tools for cutting Rendaline™ Sheets and Preformed Profiles, 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.


Hitachi C7YA Dustless Circular Saw with Dust Extraction System.

Hitachi Fibre Cement Power Saw Blade.

## 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.

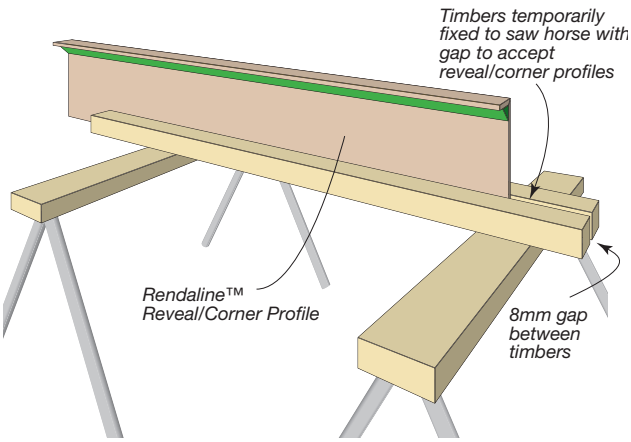
The recess should not exceed 1.5mm at its deepest point, and should be approximately 35mm wide.

Priming of the recess is not required when using the Cemintel™ Texture Coating System. In other cases follow the manufacture's recommendations.


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

**FIG 9: Preparation Of Site-formed Recess**


An easily constructed jig simplifies on-site cutting of reveal and corner profiles.



# SHEET FIXING

Sheets should be installed vertically wherever possible. Above and below openings, single sheets can be used horizontally to reduce the number of joints.

Plan sheet layout so that, wherever possible, full width sheets are used and straight joints are formed using recessed edges. Where necessary, cut sheets to size (200mm minimum width) and form recessed edges before installation.

Sheets should be tightly butted together at the centre of the top hat. The suitability of this joint configuration must be confirmed with the coating system manufacturer where Cemintel™ Texture Coat system is not used.

Fasteners must be positioned 12mm minimum from all sheet edges, 50mm minimum from all sheet corners as detailed in FIG10. Refer to Table 3 for maximum fixing centres.

Fastener heads must be driven flush with the sheet surface. Refer FIG 11.

**FIG 10: Fastener Placement**

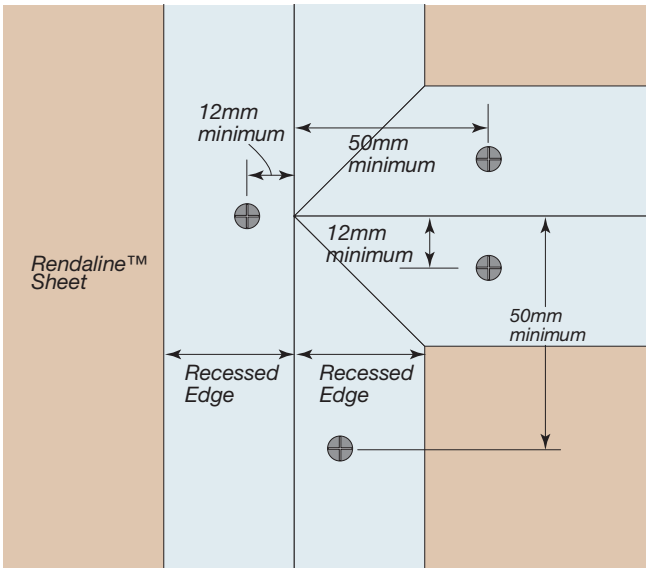



**FIG 11: Fastener finishing**

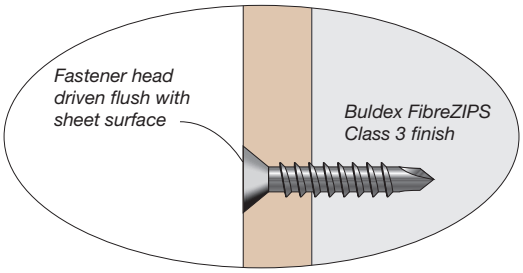


**Table 3: Panel Fixing Requirements**

| Ultimate wind pressure (kPa) | Max. Top Hat Horizontal Spacing (mm) | | Max. Fixing Spacing (mm) | |
|---|---|---|---|---|
| | Panels Fixed to Two Top Hats | Panels Fixed to Three or More Top Hats | At Panel Edge (mm) | At Panel Field (mm) |
| 1.0 | 450 | 600 | 400 | 200 |
| 1.5 | 450 | 450 | 400 | 200 |
| 2.0 | 400 | 450 | 400 | 150 |
| 2.5 | 400 | 450 | 300 | 100 |
| 3.0 | 300 | 450 | 300 | 100 |
| 3.5 | 300 | 400 | 300 | 75 |
| 4.0 | 300 | 400 | 250 | 75 |
| 4.5 | 300 | 400 | 200 | 75 |

**FIG 12: Typical Fixing Detail - Vertical RendaLine Sheet**

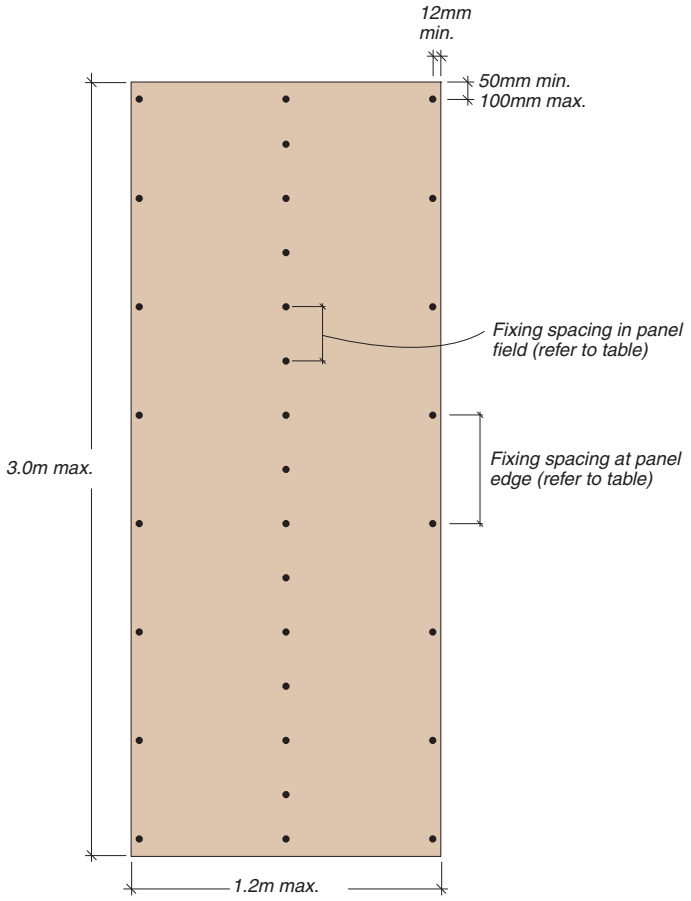
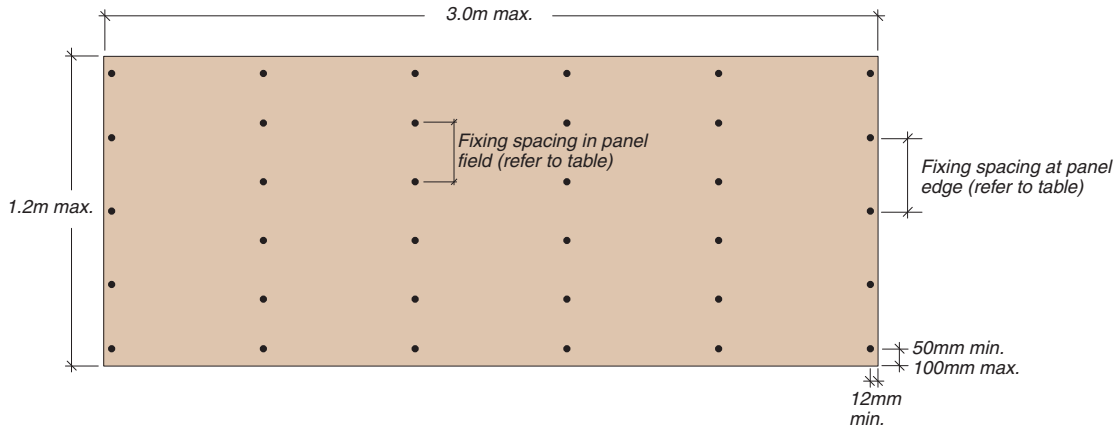



**FIG 13: Typical Fixing Detail - Horizontal Fascia Panel**



# HANDLING, STORAGE & SAFETY

All Cemintel Rendaline™ Sheets must be stacked flat, clear of the ground, and supported on a level platform.

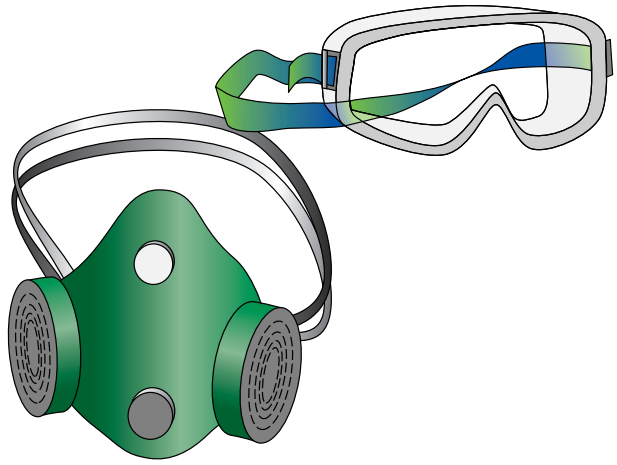
Care must be taken to avoid damage to edges, ends and surfaces.

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.

When cutting or grinding fibre cement sheets or preformed profiles 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.



# CONSTRUCTION DETAILS

**FIG 14: Layout Overview**

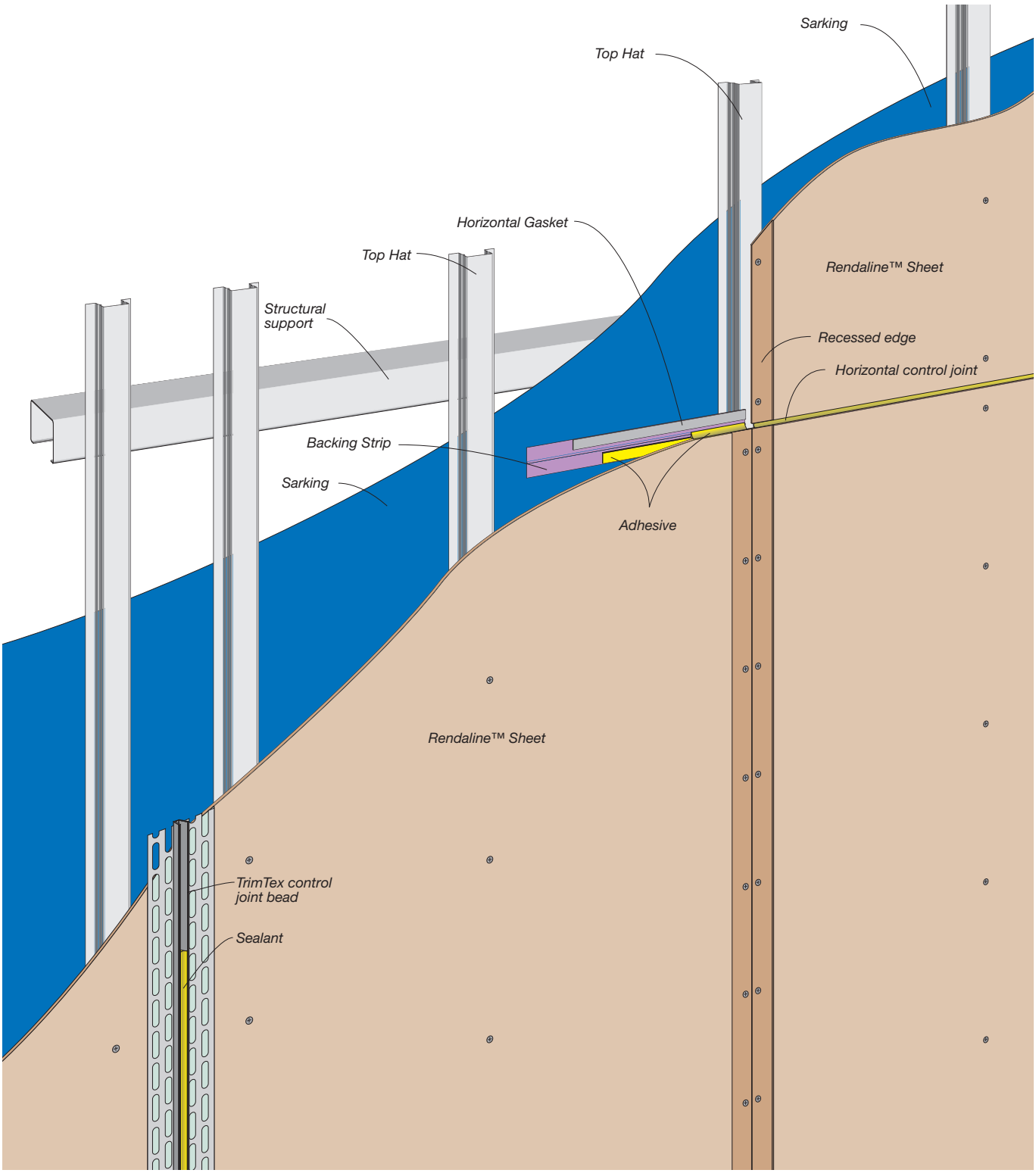


**FIG 15: Rendaline™ Fixing at Sheet Joint**

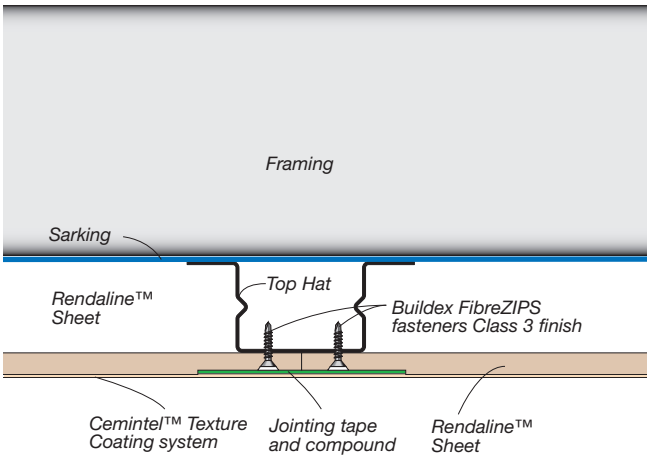



**FIG 16: Rendaline™ Fixing in Field**

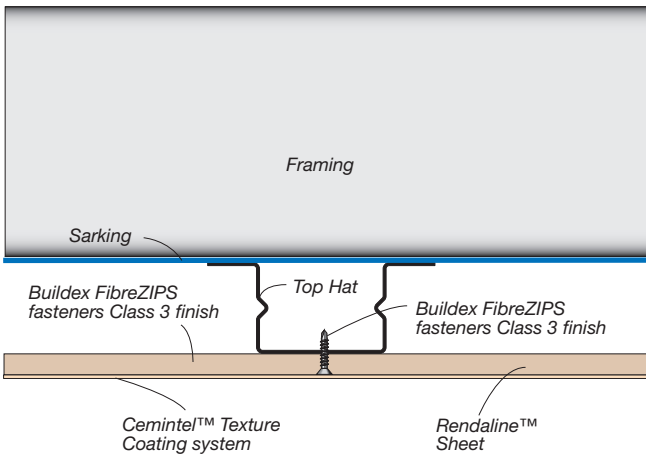



**FIG 17: Vertical Control Joint Option 1**

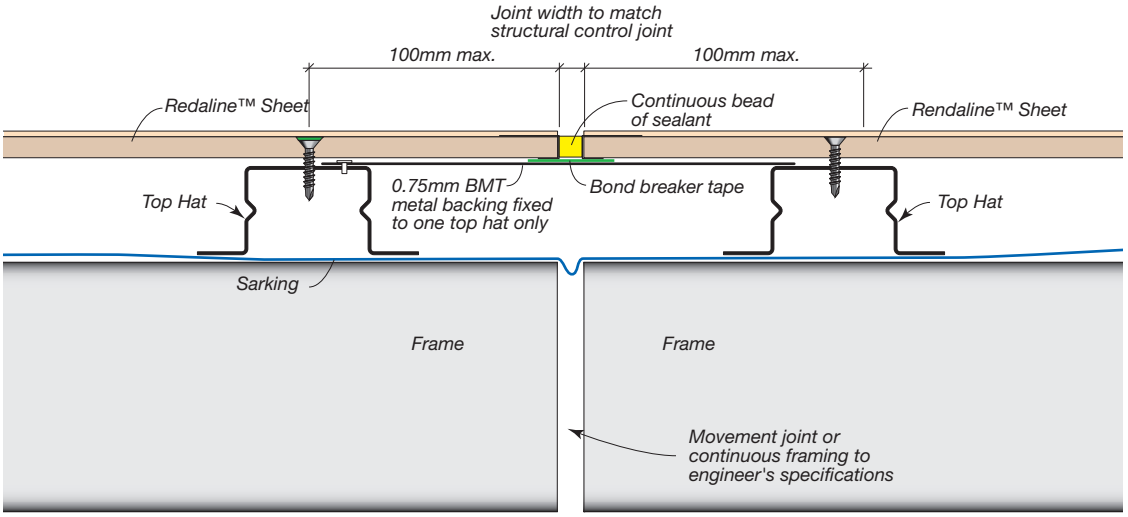



**FIG 18: Vertical Control Joint Option 2**

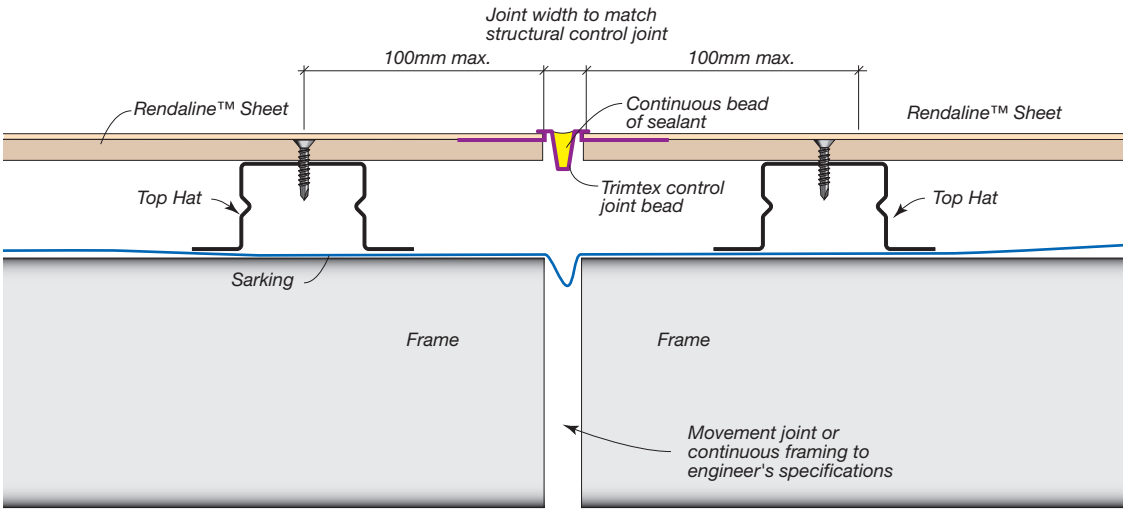


**FIG 19: Horizontal Control Joint Option 1**

**Not suitable in coastal areas.**

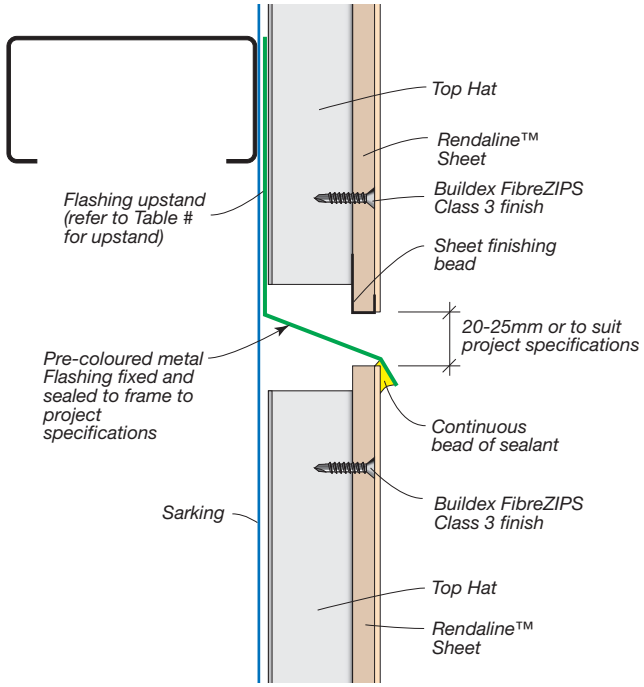



**FIG 20: Horizontal Control Joint Option 2**

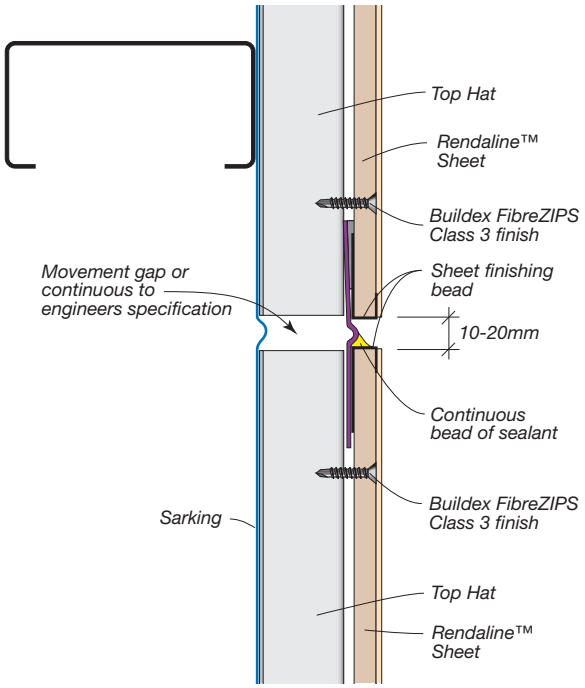



**Table 4: Flashing Upstand**

| Ultimate Design Wind Pressure (kPa) | Flashing Upstand Minimum (mm) |
|---|---|
| 2.5 | 150 |
| 3.5 | 200 |
| 4.0 | 250 |
| 5.0 | 300 |
| 6.0 | 350 |
| 7.0 | 400 |

**FIG 21: Internal Corner Detail**

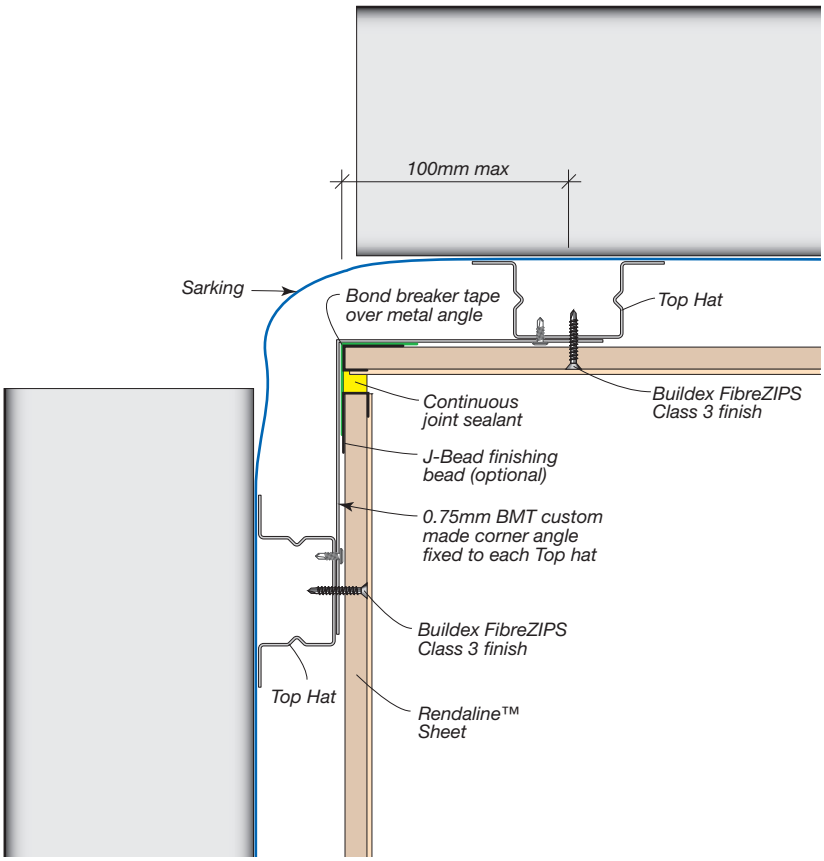


**FIG 22: External Corner with Preformed Corner**

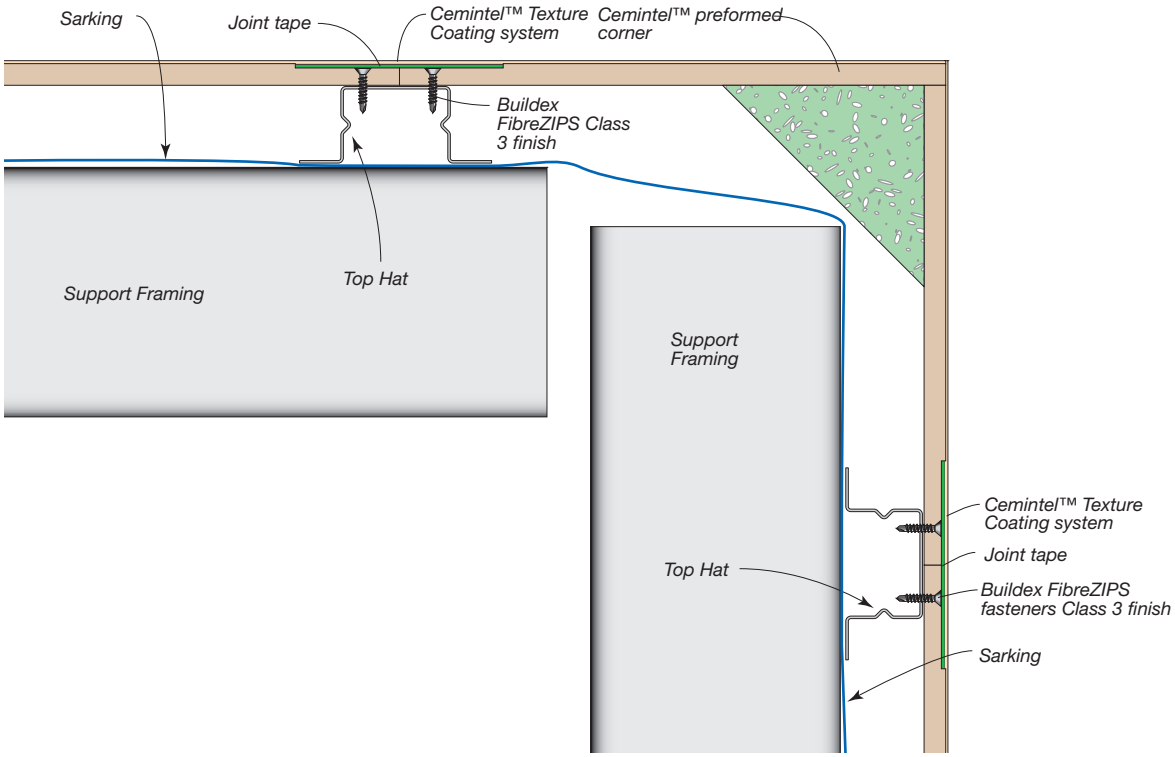



**FIG 23: External Corner with PVC Corner Mould**

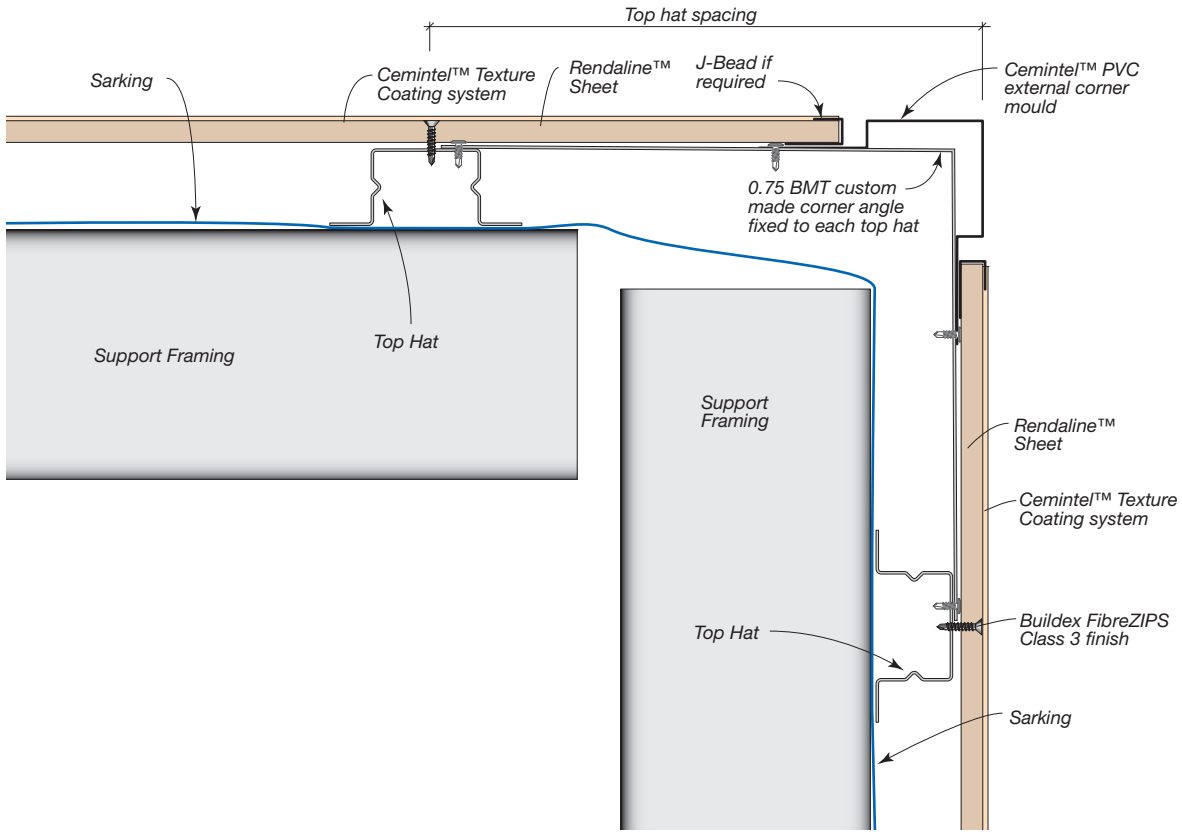


**FIG 24: External Corner with Square Edge Sheet**

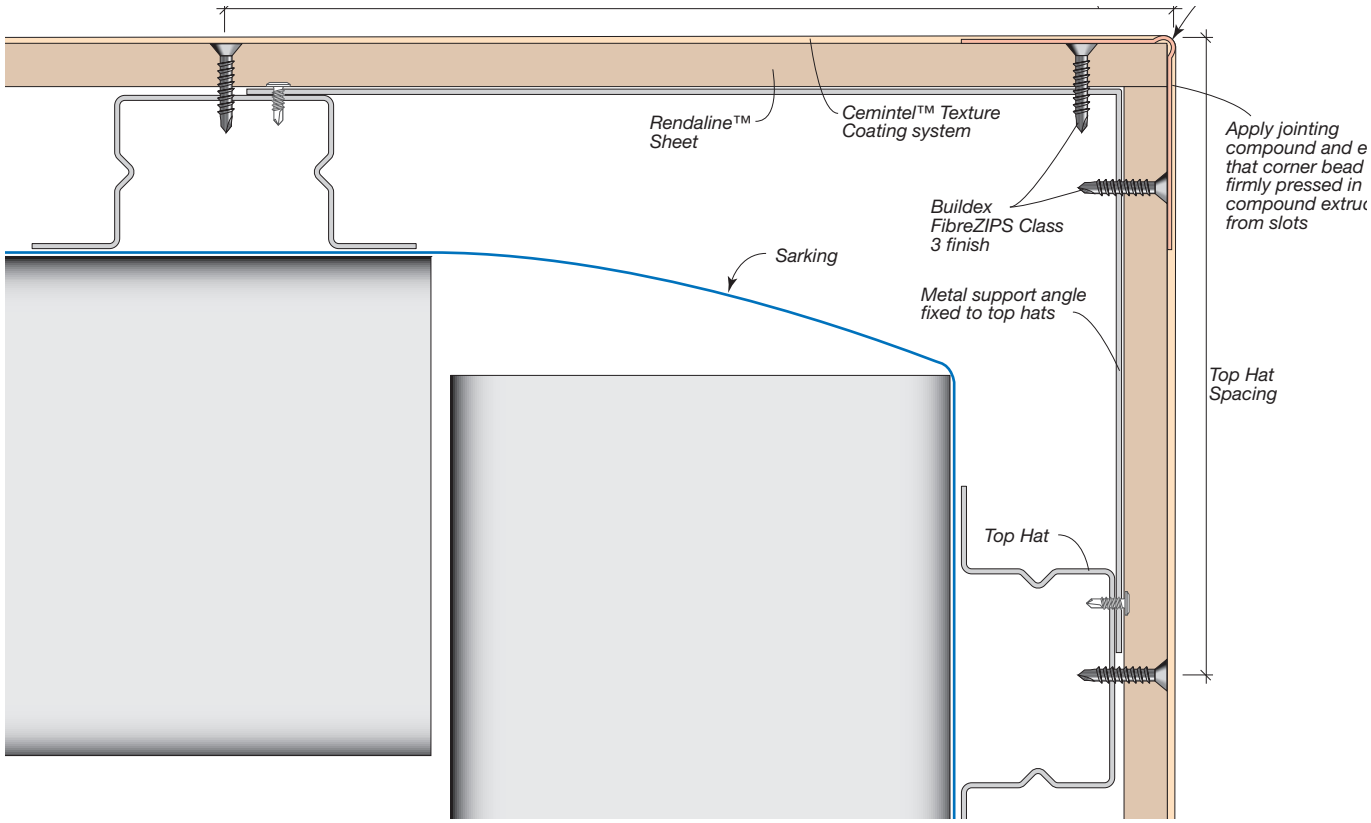
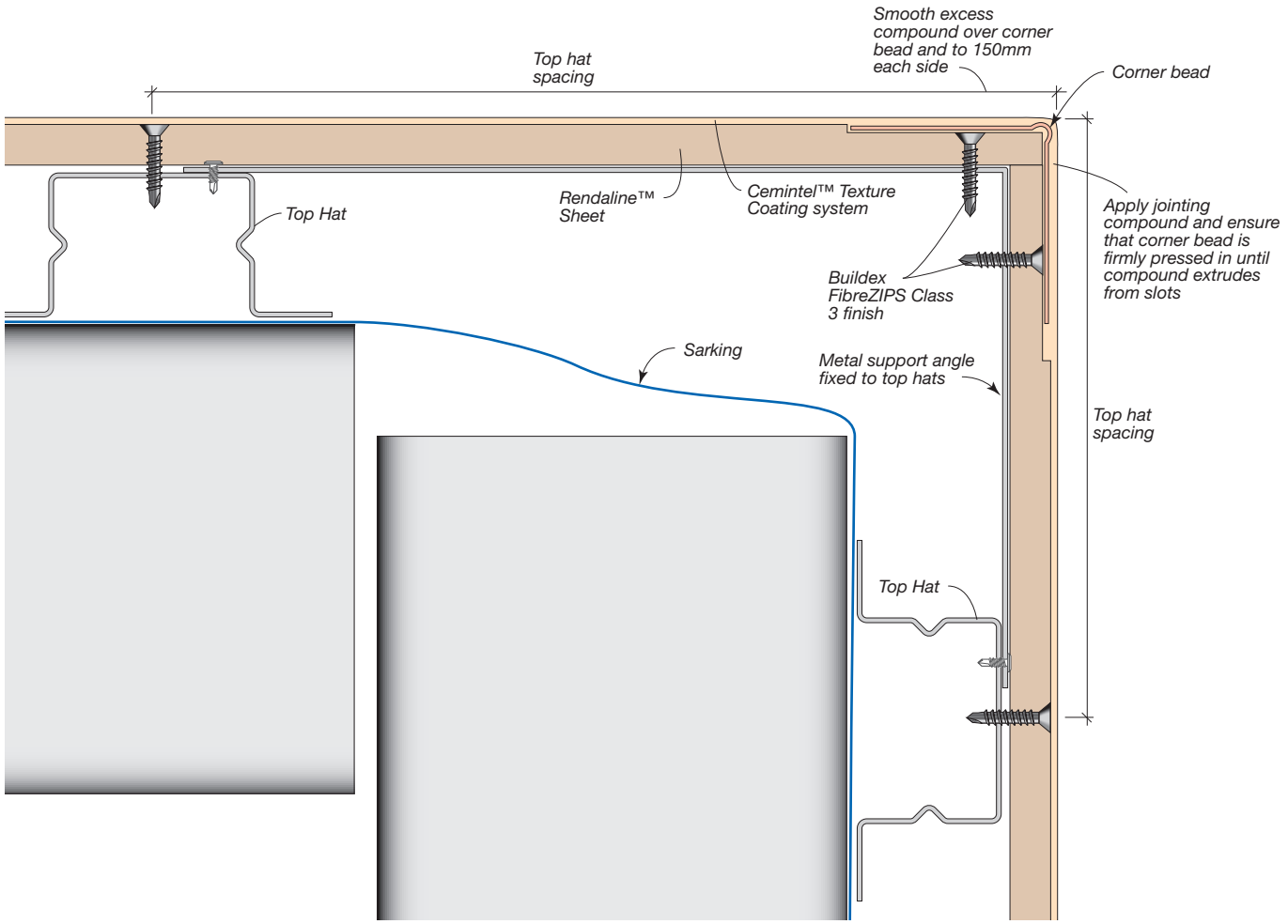
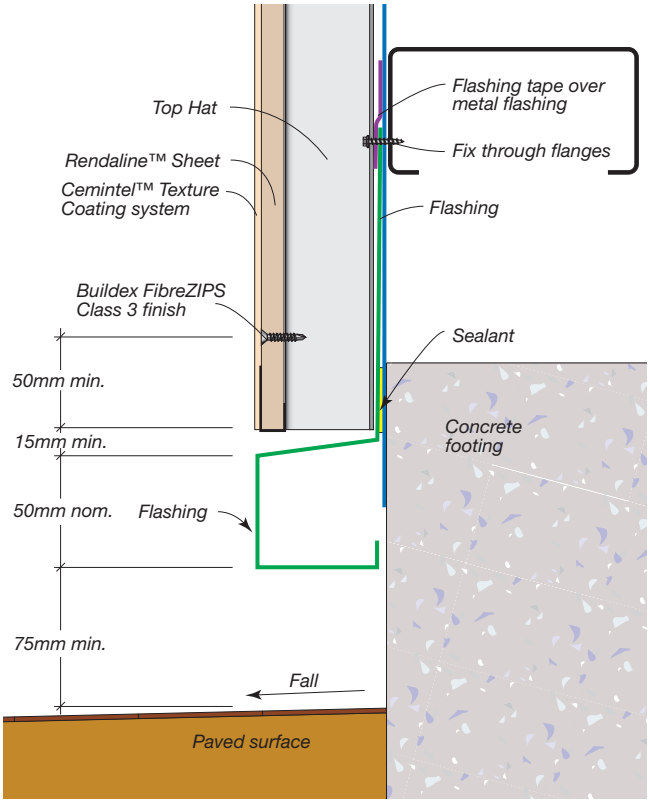


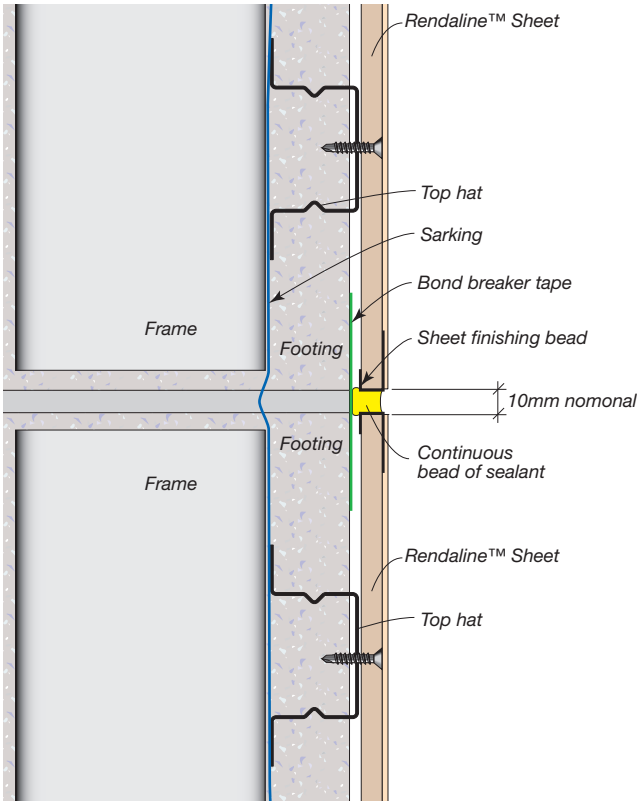

**FIG 25: External Corner with Recessed Edge Sheet**



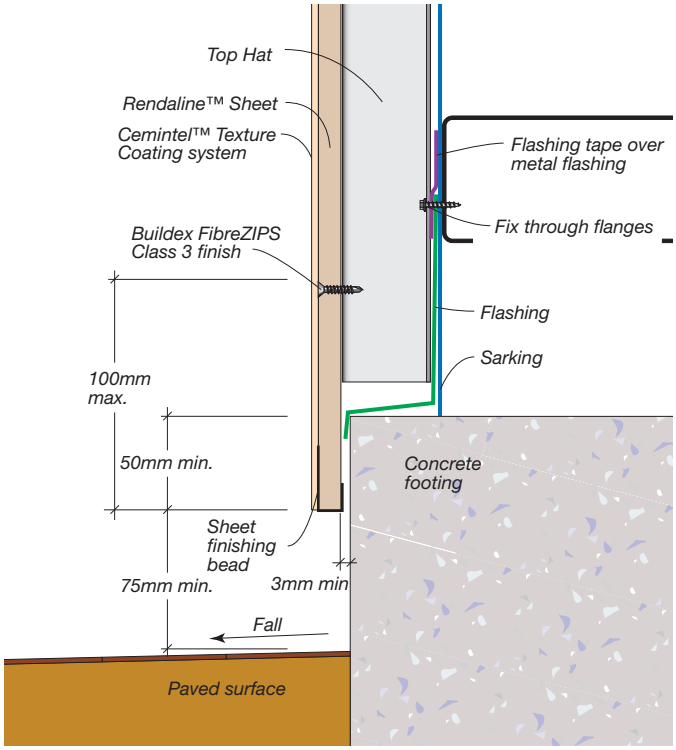
### FIG 26: Base Detail with Metal Finishing Strip



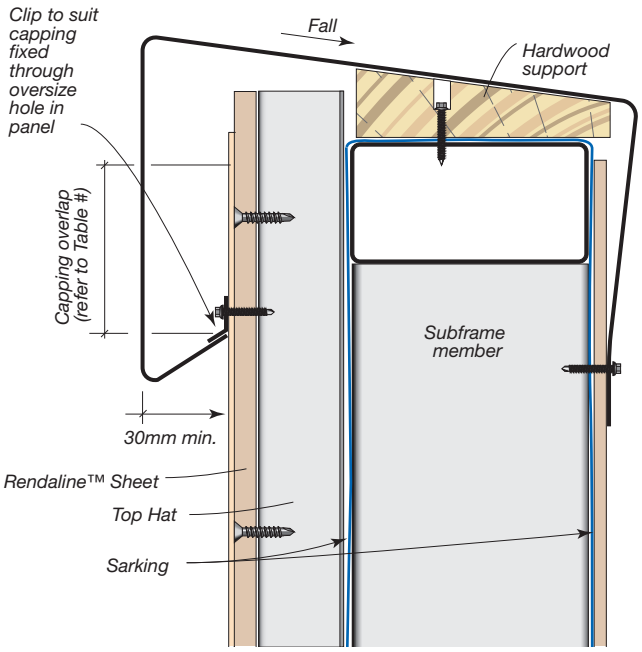

### FIG 27: Construction Joint



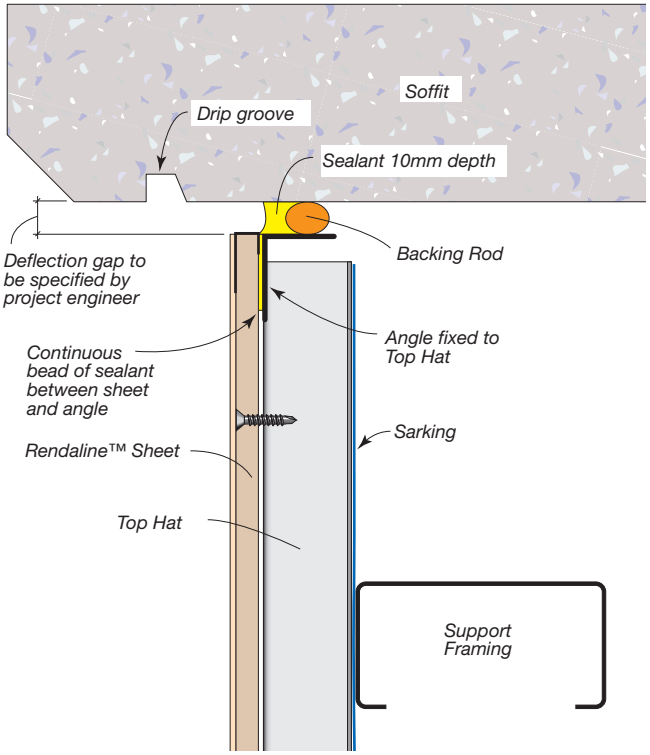

### FIG 28: Base Detail Overlapping Slab



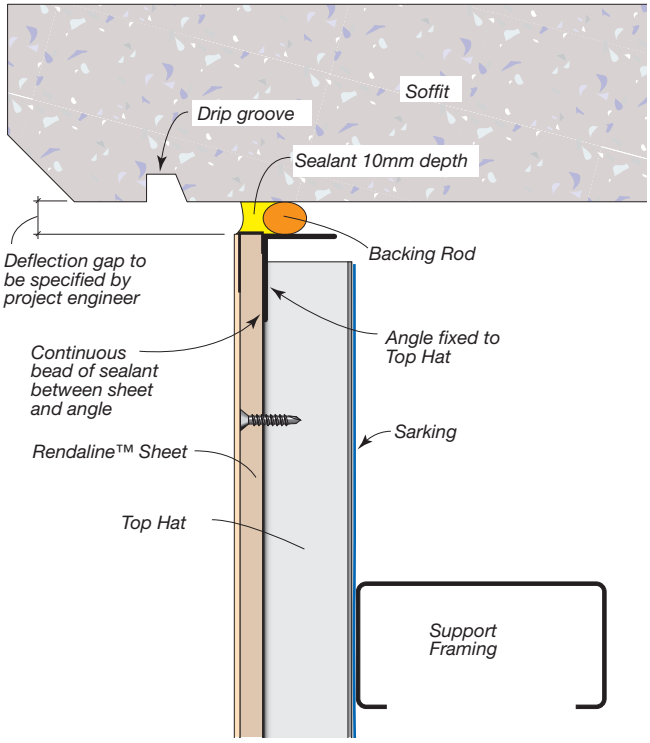

### FIG 29: Parapet/Fascia Capping Detail



### FIG 30: Deflection Head Option 1




### FIG 31: Deflection Head Detail Option 2




### FIG 32: Framed Fascia/Soffit/Wall

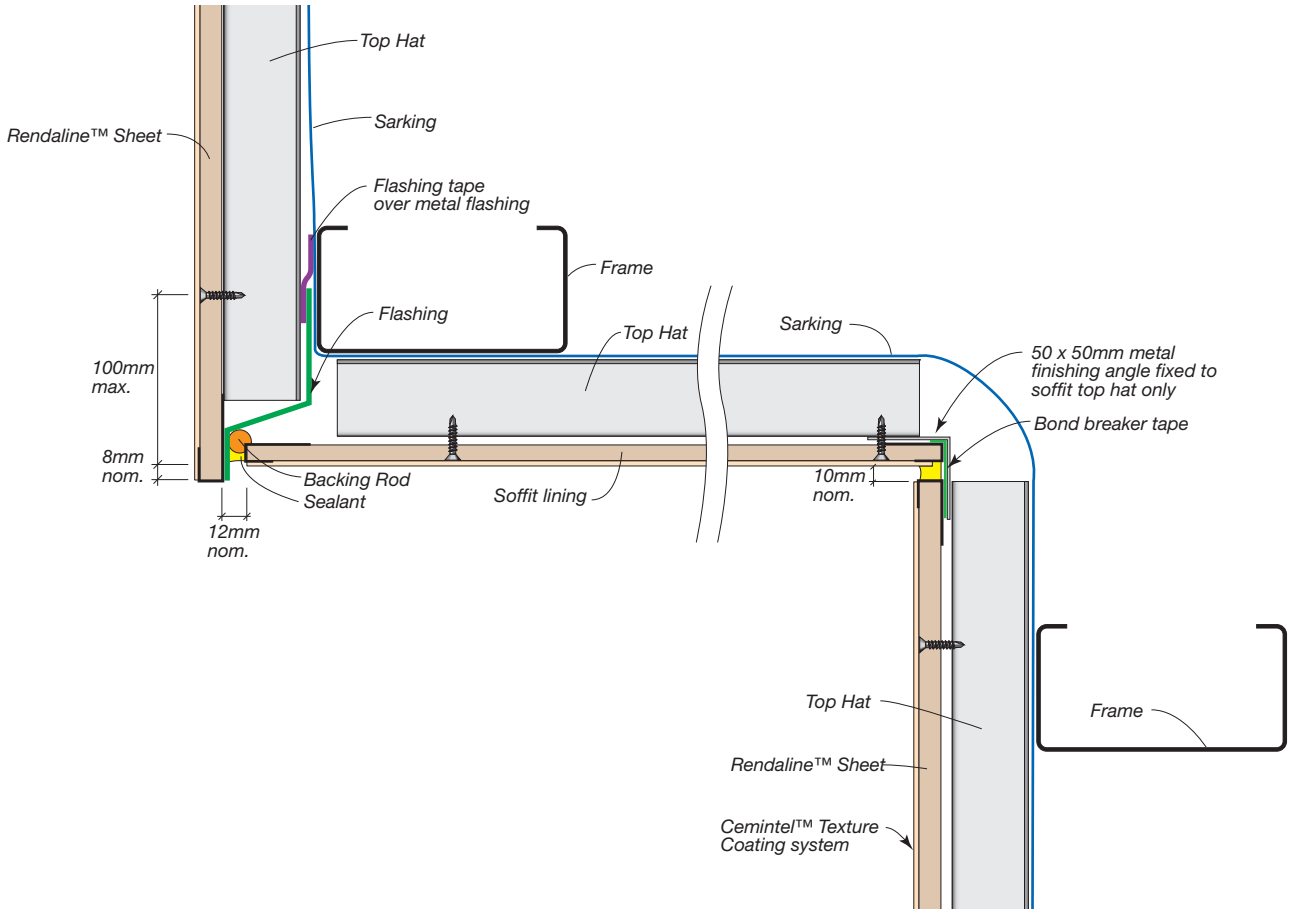


**FIG 33: Flush Window Head Detail**

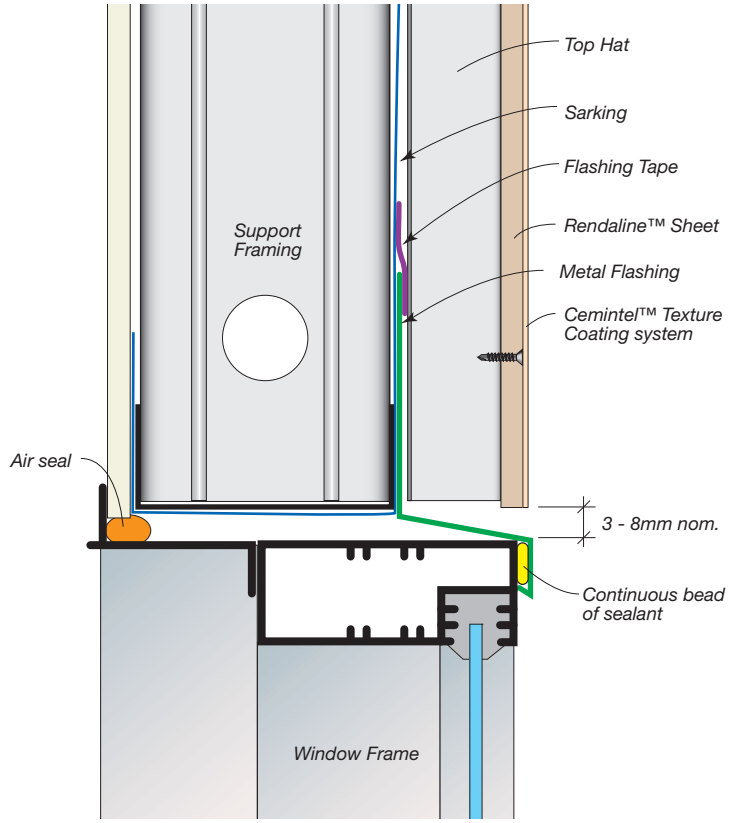



**FIG 34: Flush Window Sill Detail**

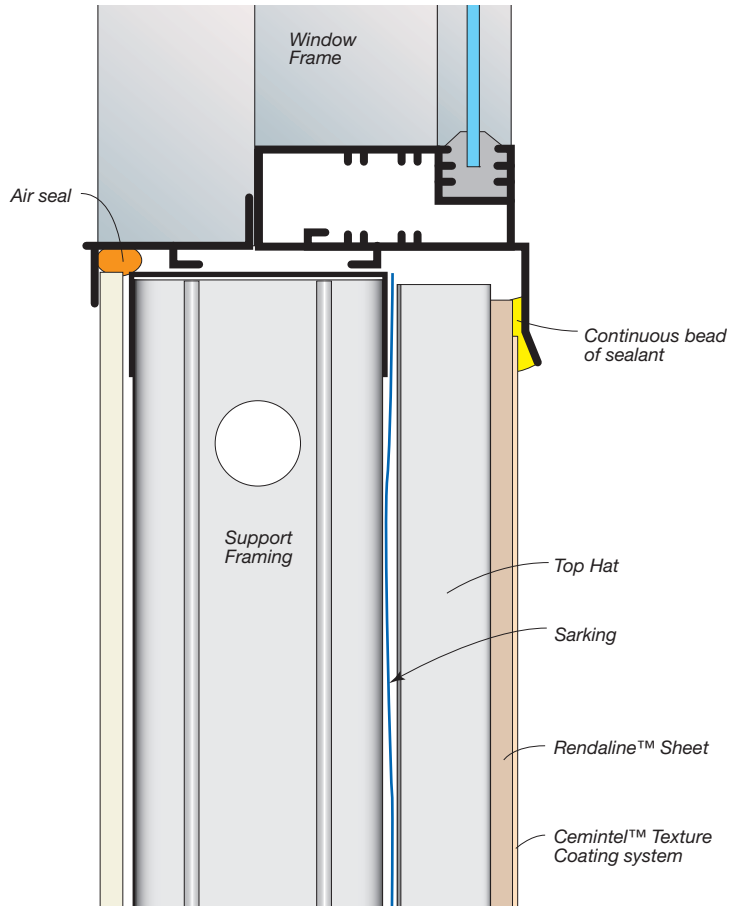


**FIG 35: Recessed Window Head Detail**

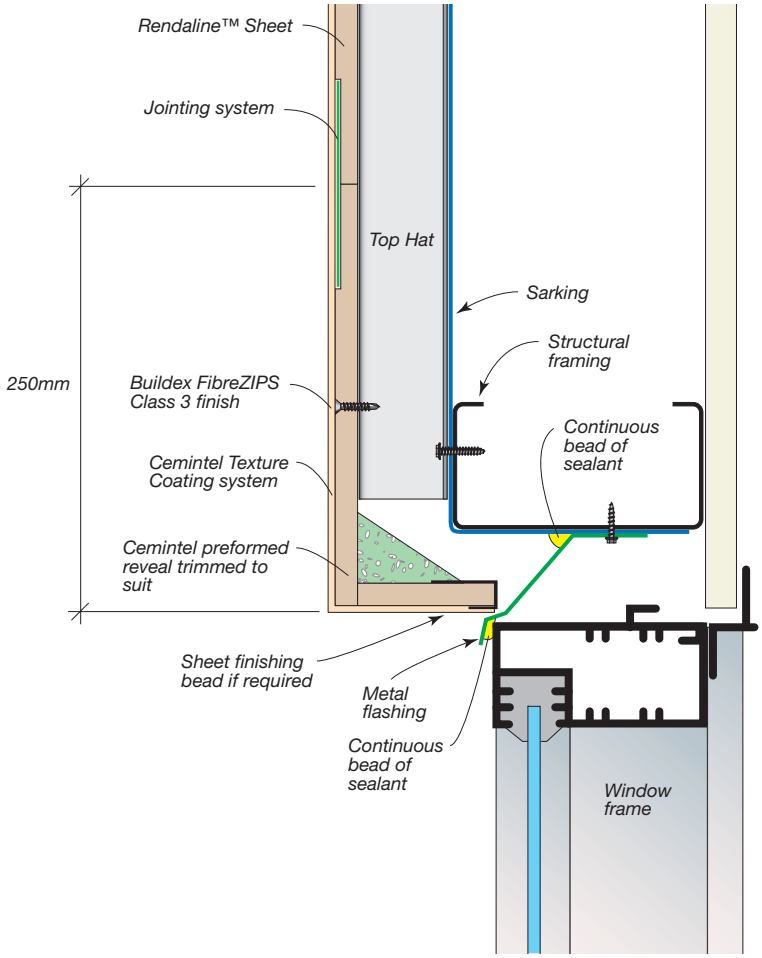



**FIG 36: Recessed Window Sill Detail**

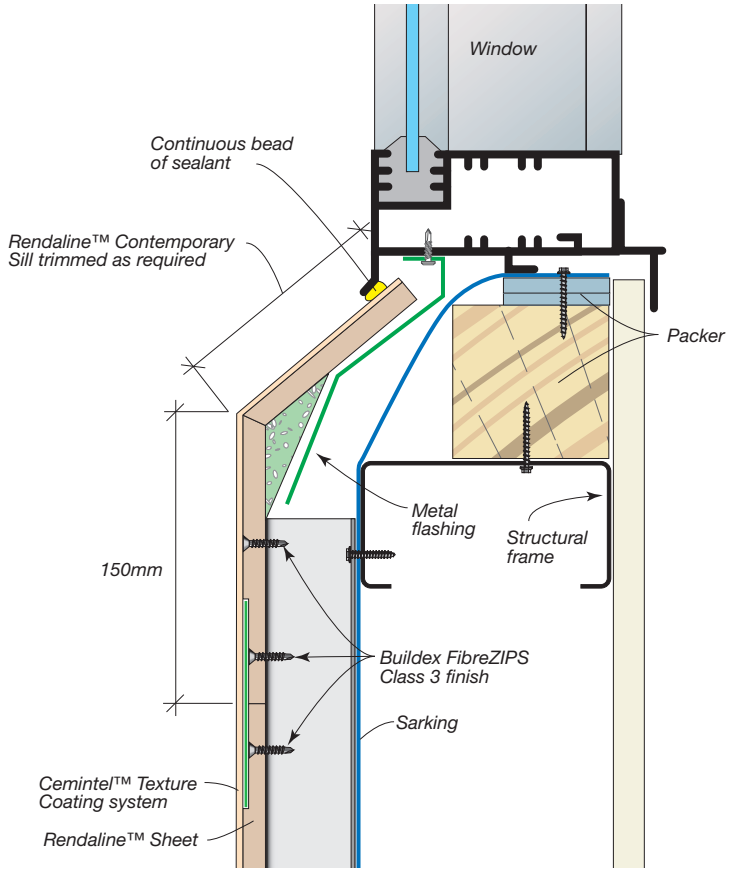


**FIG 37: Window Jamb Option 1**

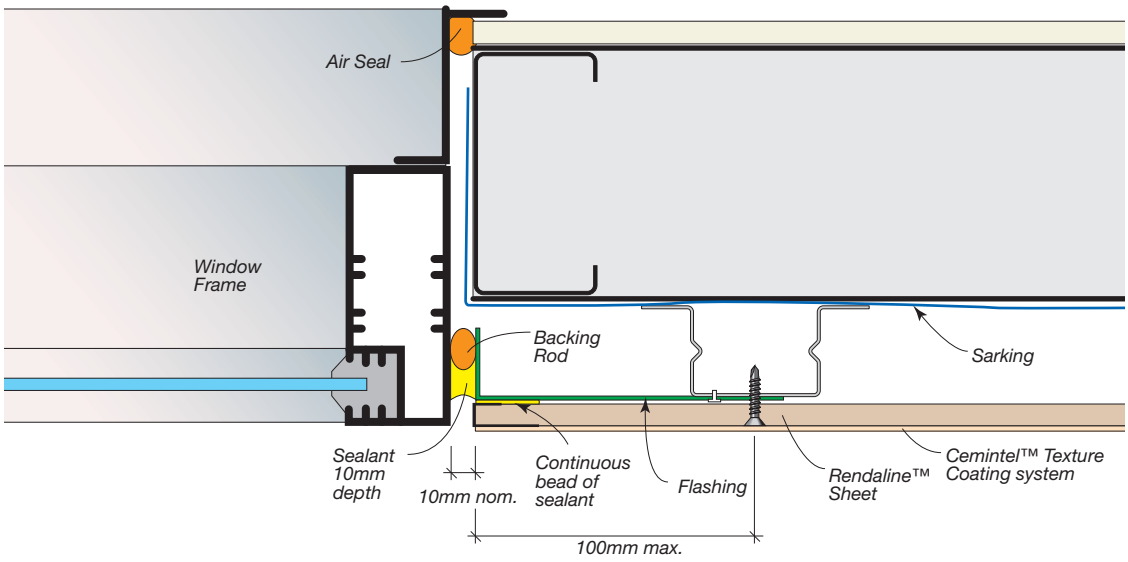



**FIG 38: Window Jamb Option 2**

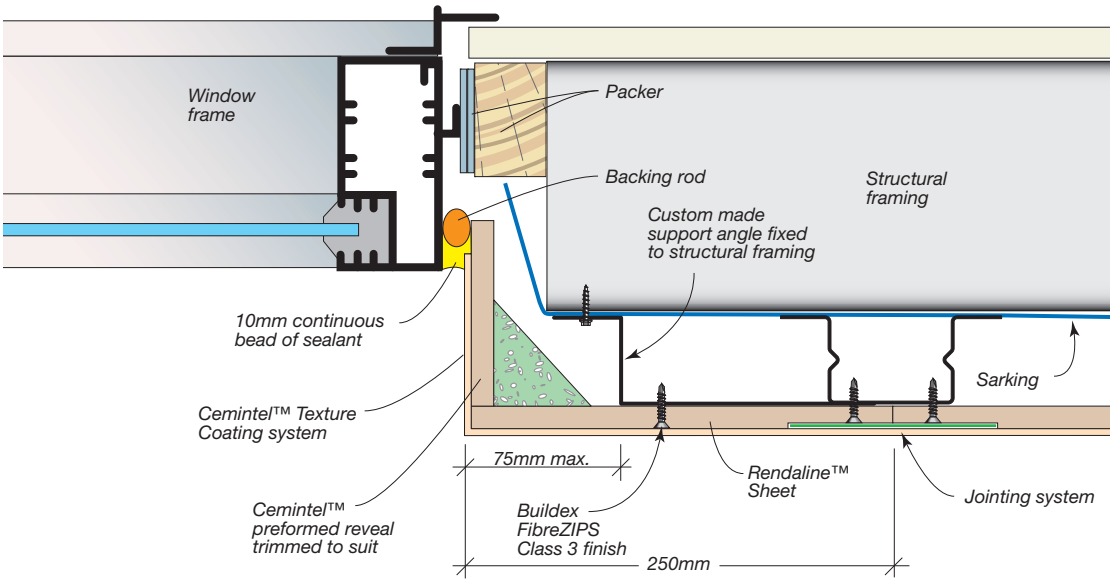
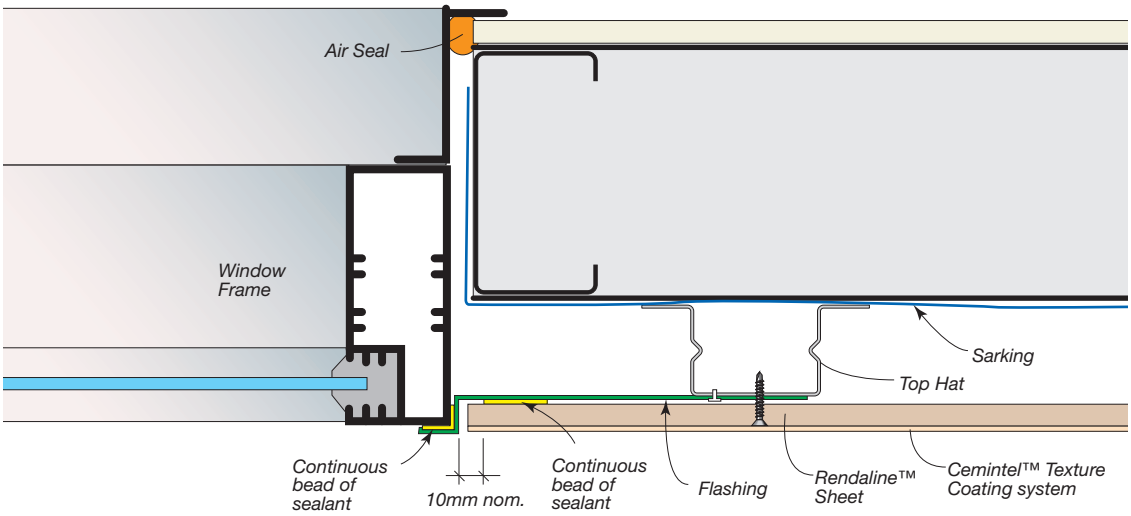



**FIG 39: Window Jamb Option 3**



# JOINTING & COATING SYSTEM

## PLANNING

Cemintel™ Texture Coating system is an integral part of Rendaline™. Other coating systems may be used where recommended and warranted by their manufacturer.

Texture coating compounds must not be applied when the air or sheet surface temperature is below 10ºC or above 30ºC. In case of impending rain, coating application should be stopped in time to allow the product to cure adequately.

Application in extreme heat or windy conditions should be avoided. Where possible, stage the coating process to work in shaded areas. Cemintel™ Compounds must be protected from rain and frost for the first 24 hours of application.

Always work safely, using suitable scaffolding on high walls.

Exposed top edges of sheets must be protected from water ingress using a finishing bead or flashing.

## PREPARATION

Ensure that the fibre cement surface is dry and free of dust, dirt, mould, and other contaminants. In coastal areas surface salt should also be removed. Inadequate cleaning may result in poor coating adhesion and low joint strength.

It is important that sheets are butted together and flush at all joints. Misalignment of sheets may result in unacceptable joint visibility. Ensure that all fasteners are embedded correctly, with the head of the fastener flush with the sheet, to ensure the smooth application of coating materials.

## JOINTING

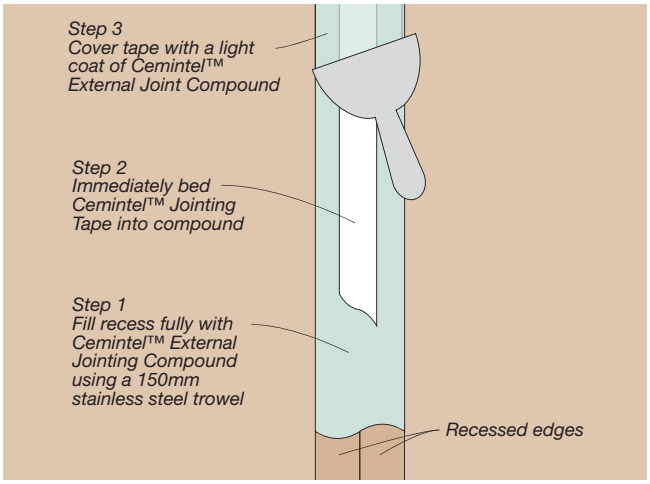
Fill the fibre cement sheet recesses evenly and fully with Cemintel™ External Jointing Compound, using a stainless steel 150mm broad knife. Immediately bed in Cemintel™ Jointing Tape centrally over the joint, with the smooth side facing outwards. Cover tape with a light coating of Cemintel™ External Jointing Compound.

Cemintel™ Jointing Tape must be clean, and where possible, used in one length in each joint. Tape must be straight and fully bedded into the compound.

Cover all fastener heads and any surface imperfections with Cemintel™ External Jointing Compound.

Allow the jointing compound to fully dry before applying the skim coat. A minimum of 24 hours is recommended, depending on atmospheric conditions. Some shrinkage of the compound will occur as it dries, and under hot dry conditions, minor 'mud' cracking may appear. This is normal and will not affect the integrity of the joint

**FIG 40. Joint Taping**




## INTERNAL AND EXTERNAL CORNER DETAIL

The PVC corner bead is fixed to the fibre cement sheets using Cemintel™ External Jointing Compound. Apply an even layer of jointing compound to both sides of the corner using a 150mm broad knife. Push the corner angle firmly into position until compound extrudes from the holes. Smooth the excess compound over the corner angle and to 150mm each side of the corner. The sheet finishing strip may be adhesive fixed in a similar manner.

Allow the jointing compound to dry before commencing to skim coat.

**FIG 41. External Corner**

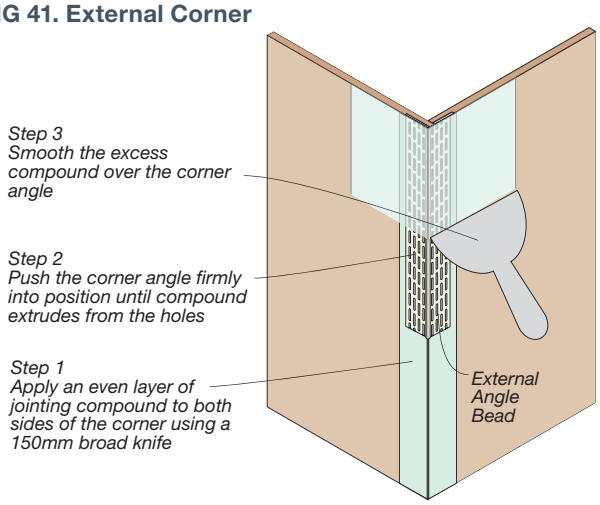
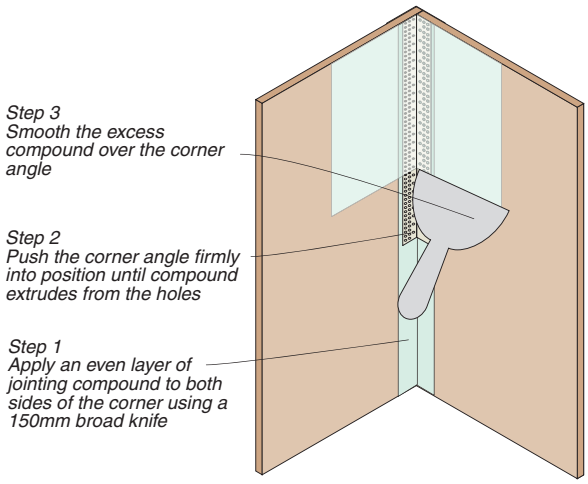


**FIG 42. Internal Corner**




## SKIM COAT

The Cemintel™ Skim Coat should only be applied after Cemintel™ External Jointing Compound is fully dry.

Apply a layer of Cemintel™ Skim Coat to the entire surface using a steel trowel. Sufficient material should be used to ensure a uniform surface and to eliminate the outline of joints, fixings etc. If this is not achieved by a single coat, a second coat is recommended.

For best results, apply the skim coat in the same direction as the joint to fill any gaps that occur.

Allow Cemintel™ Skim Coat to fully dry prior to the application of Cemintel™ Texture Coat. Allow at least 24 hours in warm, dry conditions, longer in cold or wet conditions.

Inspect the walls after skim coating to ensure the surface is flat. If there are any imperfections, these should be repaired with Cemintel™ Skim Coat. Cemintel™ Texture Coat may not adequately hide imperfections visible in the skim coat.

## TEXTURE COAT

Cemintel™ Texture Coat is applied over the skim coat using a steel trowel. The texture coat contains graded sand particles that act as a guide to the required coating thickness. Apply a thin layer only, as excess material will cause the plastic float to stick, making it difficult to achieve a consistent finish. The coating should be applied from the top of the wall, working down in strips about one metre wide.

Once applied, the texture coat is trowelled with a plastic finishing float that provides a uniform texture. Ensure that all coated areas are floated before the texture coat begins to dry, as touching up dried coating is not recommended. For optimum results, one applicator applies the Cemintel™ Texture Coat and a second applicator uses the finishing float.

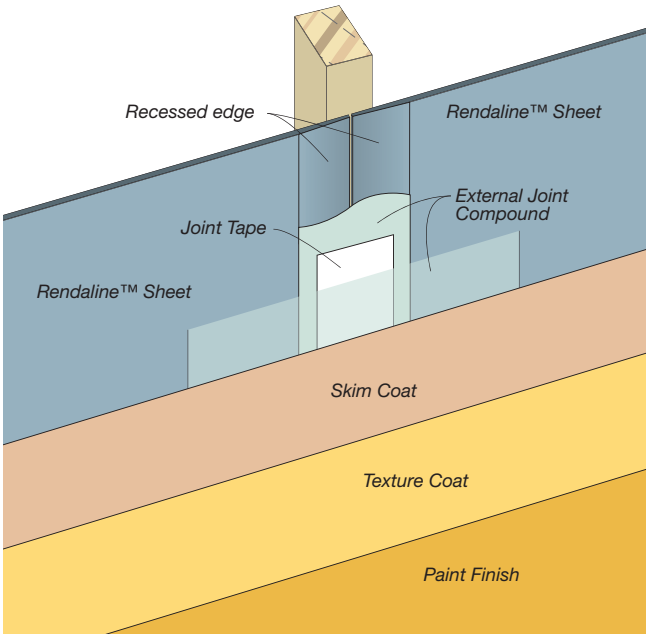
Isolated areas should be completed in a single application to avoid join marks. Large areas can be broken into smaller workable sections, especially during periods of high temperatures or in windy conditions.

Applications that have commenced in an isolated area should continue uninterrupted. Rapid, uniform and continuous application is essential to maintain a wet edge, especially in warm weather.

Cemintel™ Texture Coat should be touch dry in one hour at 25°C and 50% relative humidity. It is should be fully dry and able to be painted after 72 hours, although lower temperature or higher humidity will increase the drying time.

Vibrations such as nail fixing the internal linings should be avoided until the texture coat is dry. This is to reduce the likelihood of the sheet fasteners protruding and the coating being damaged.

**FIG 43. Cemintel™ Texture Coating System.**



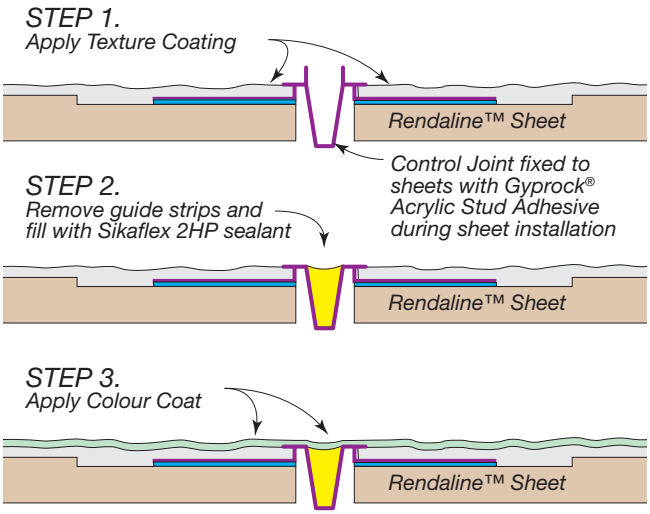
## PAINT FINISH

It is recommended that Cemintel™ Texture Coating system be finish coated with an exterior grade, water-based acrylic paint. This will increase the life of the system and reduce long-term dirt entrapment.

It is recommended that dark colours be avoided on walls subject to long periods of sun exposure, to minimise joint stress.

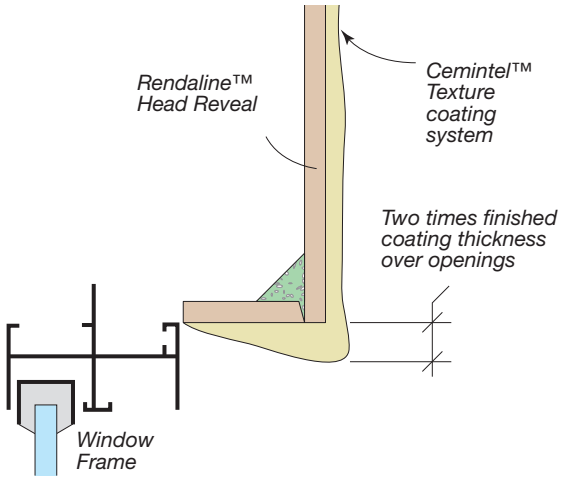
Under glancing light conditions, where light shines close to parallel to the surface, sheet joints may be visible. Under normal light conditions, sheet joints should not be visible.

**FIG 45: Control Joint Finishing**

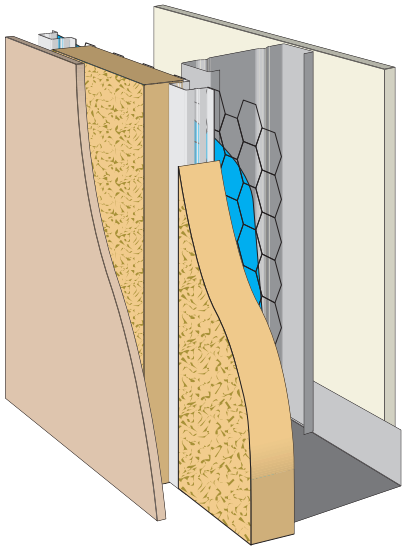



**Applying a Paint Finish**

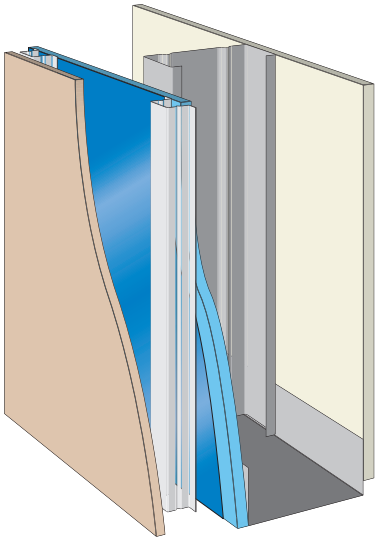
**FIG 44: Drip Stop Over Openings**



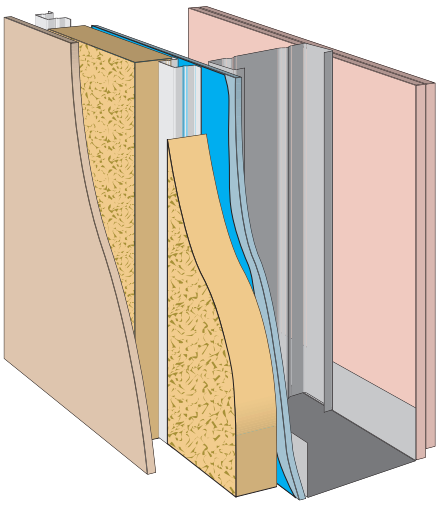
# FIRE RATED WALL SYSTEMS

| SYSTEM SPECIFICATION | TYPICAL LAYOUT | ACOUSTIC OPINION |
|---|---|---|
| • Cemintel Rendaline™ sheet and framing system.<br>• 25mm Bradford Fibertex™ Rockwool.<br>• Wire mesh.<br>• Vapour barrier<br>• Steel studs at 600mm maximum centres.<br>• Lining material as per system table. |  | PKA-A025 |

| FRL Report/Opinion | SYSTEM N° | WALL LININGS | STUD DEPTH mm | 76mm |
|---|---|---|---|---|
| | | | CAVITY INFILL | $R_w$ |
| 60/60/60 (from outside only)<br>FAR2357 | CSR 170 | *Internal Wall Side*<br>• 1 x 10mm GYPROCK® Plasterboard CD. | (a) Nil | 43 |
| | | | (b) 75 ComfortSeal™ R1.5 batts | 44 |
| | | | (c) 60 SoundScreen™ R1.6 RW | 44 |
| | | | **WALL THICKNESS mm** | **134** |
| 60/60/60<br>FAR2357 | CSR 171 | *Internal Wall Side*<br>• 1 x 16mm GYPROCK® FYRCHEK plasterboard. | (a) Nil | 45 |
| | | | (b) 75 ComfortSeal™ R1.5 batts | 46 |
| | | | (c) 60 SoundScreen™ R1.6 RW | 46 |
| | | | **WALL THICKNESS mm** | **140** |

| SYSTEM SPECIFICATION | TYPICAL LAYOUT | ACOUSTIC OPINION |
|---|---|---|
| • Cemintel Rendaline™ sheet and framing system.<br>• Vapour barrier.<br>• 1 x 13mm GYPROCK® FYRCHEK MR plasterboard.<br>• Steel studs at 600mm maximum centres.<br>• Lining material as per system table. |  | PKA-A025 |

| FRL Report/Opinion | SYSTEM Nº | WALL LININGS | STUD DEPTH mm | 76mm |
|---|---|---|---|---|
| | | | CAVITY INFILL | Rw |
| 60/60/60 (from outside only)<br>FAR2357 | CSR 167 | *Internal Wall Side*<br>• 1 x 10mm GYPROCK® Plasterboard CD. | (a) Nil | 37-41 |
| | | | (b) 75 ComfortSeal™ R1.5 batts | 40-44 |
| | | | (c) 60 SoundScreen™ R1.6 RW | 41-45 |
| | | | **WALL THICKNESS mm** | **147** |

| SYSTEM SPECIFICATION | TYPICAL LAYOUT | ACOUSTIC OPINION |
|---|---|---|
| • Cemintel Rendaline™ sheet and framing system.<br>• 25mm Bradford Fibertex™ 450 Rockwool.<br>• Vapour barrier.<br>• 1 x 6mm Cemintel™ Fibre Cement Wallboard.<br>• Steel studs at 600mm maximum centres.<br>• Lining material as per system table. |  | PKA-A025 |

| FRL Report/Opinion | SYSTEM Nº | WALL LININGS | STUD DEPTH mm | 76mm |
|---|---|---|---|---|
| | | | CAVITY INFILL | Rw |
| 90/90/90<br>FAR2357 | CSR 179 | *Internal Wall Side*<br>• 2 x 13mm GYPROCK® FYRCHEK plasterboard. | (a) Nil | 44-48 |
| | | | (b) 75 ComfortSeal™ R1.5 batts | 47-51 |
| | | | (c) 60 SoundScreen™ R1.6 RW | 48-52 |
| | | | **WALL THICKNESS mm** | **156** |

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CREATE AND CONSTRUCT



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# CEMINTEL RENDALINE™

FC:945

## 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.

## CEMINTEL – MANUFACTURED FOR LIFE

CSR Building Products Limited ("**CSR**") warrants its Cemintel Rendaline™ ("**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

MARCH 2015

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