

RMAX EIFS Grooved Cladding Panel
RMAX EIFS Cladding Panel
RMAX EIFS Pre-Rendered Cladding Panel

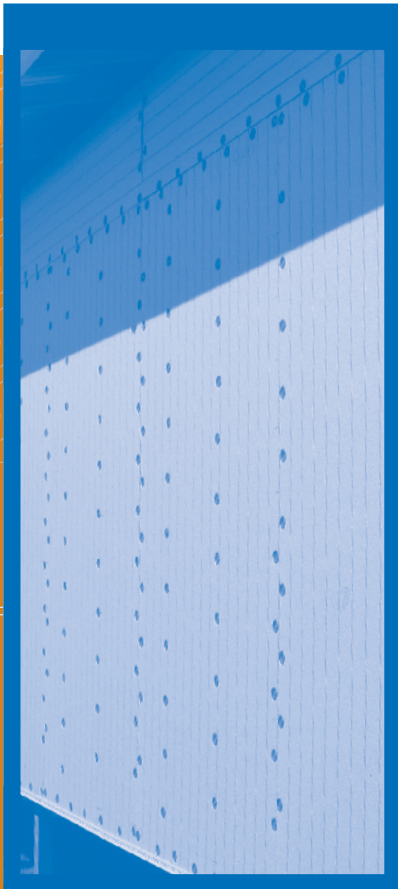


EXTERNAL INSULATED FINISHING SYSTEM (EIFS) CLADDING

Codemark
Accredited

BAL-29 Compliant

RMAX Direct Fix EIFS Cladding Product Range Technical Data And Installation Manual



**RMAX OB EIFS
Grooved Cladding
Panel**



**RMAX OB EIFS
Cladding Panel**



**RMAX OB EIFS
Pre-Rendered Cladding
Panel**

RMAX is a division of
Huntsman Chemical Company
Australia Pty. Limited
ABN 48 004 146 338



BAL-29

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CODEMARK®
Australia

NOTE:

Certificate Number CM40112

As RMAX continually tests, validates and improves its range of insulation products, the information presented in this technical brochure may have been updated since it was last printed. For the most up to date version of the RMAX Direct Fix EIFS Cladding Product Range Technical Data Manual please visit the RMAX website at www.rmax.com.au



INTRODUCTION

The RMAX Direct Fix EIFS Cladding Product Range comprises of a range of Isolite™ (orange) Expanded Polystyrene (EPS) panel building products that are all manufactured in Australia. These Exterior Insulation and Finishing Systems (EIFS) have been independently tested by NATA accredited testing laboratories to meet and exceed relevant Australian standards for external building insulating cladding products.

Please Note: The term “RMAX EIFS Direct Fix Cladding Product Range” is referenced throughout this brochure. This term covers the entire range of RMAX manufactured EIFS Cladding Panel products comprising of plain EPS panel, Pre-Rendered EPS panel and Grooved EPS panel together with all required components that go to make up the RMAX Direct Fix Cladding system.

The RMAX Direct Fix EIFS cladding product range has been designed specifically for application in the second storey of Class 1 and 10 Residential building constructions only and cannot be installed in any ground floor or single storey applications. Where it is desired for an RMAX EPS EIFS cladding system to be installed as external cladding on the ground floor of a double storey residential construction or on a single storey residential construction, the RMAX Ground Floor EIFS system is to be installed.

Please refer to the RMAX Ground floor EIFS technical installation brochure for ground floor or single storey EIFS cladding installation. The RMAX Ground floor EIFS technical data and installation manual can be downloaded directly from the RMAX website at www.rmax.com.au

CodeMark™ Certification

The entire RMAX EIFS Direct Fix Cladding Product Range has been audited and assessed by CertMark™ International (CMI). CMI is an accredited independent certification body (ISO Guide 65). In undertaking this assessment, CMI have awarded CodeMark™ certification under individual CodeMark™ Certificate Numbers CM40112, CM40114 and CM40039 covering all the individual EIFS cladding panel product types that go to make up the RMAX Direct Fix EIFS Cladding Product Range.

The CodeMark™ Certificate of conformity outlines National compliance of the RMAX EIFS Direct Fix EIFS Cladding Product Range External Wall Cladding for use in class 1 and 10 buildings to the 2019 Building Code of Australia (BCA) codes relating to:

- Structural Integrity
- Weatherproofing
- Construction in Bushfire Prone Areas (BAL)
- Energy Efficiency for External Walls

The individual CodeMark™ certificates for each of the RMAX Direct Fix EIFS Cladding Products can be downloaded from the RMAX website at www.rmax.com.au, or can be sourced directly through your local RMAX Direct Fix EIFS Cladding Product Range distributor.

Benefits of installing the RMAX Direct fix EIFS cladding system

The RMAX Direct fix EIFS cladding system provides a weatherproof, impact resistant cladding and insulation system for Class 1 and 10 residential building applications and is used as an alternative integrated façade system to traditional masonry facade systems.

Although the RMAX Direct fix EIFS cladding system is suitable for application in Class 1 and 10 buildings, it is NOT applicable for use in any Class 2 to 9 commercial building.

The RMAX Direct fix EIFS cladding system comprises of the following proprietary components that go to make up the Codemark certified system:

- 2500mm x 1200mm x 75mm or 100mm thick RMAX Orange Board EPS EIFS panels. M grade (18g/l) density **OR**
- 2500mm x 1200mm x 75mm or 100mm thick RMAX Orange Board grooved EPS cladding panels . M grade (18g/l) density **OR**
- 2500mm x 1200mm x 75mm or 100mm thick RMAX Orange Board EPS Pre-rendered cladding panels . M grade (18g/l) density.
- RMAX Ground floor EIFS aluminium starter channel assembly Option A (Design and innovation patent pending)
- RMAX OB Plus Render and mesh
- RMAX OB Primer.
- 10G x 150mm length CSK head Coarse Ribbed Class 4 needle point fasteners.
- RMAX Orange Board washers.
- Bituminous Aluminium flashing tape. ®
- Aluminium / PVC corner angles.
- Approved Polyurethane construction foam adhesive.
- Fire Sound Fire Rated Sealant.
- Selleys Liquid Nails Fast-grab construction adhesive or Selleys Liquid Nails Instant Hold construction adhesive only.

Please Note: Other Selleys Liquid Nails construction adhesive products have not been tested and may not be compatible with EPS.

Where required or requested by the relevant project specifier, the EPS panels that go to make up the RMAX Direct Fix EIFS cladding system can be manufactured and supplied with a termite resistant additive as part of their composition.

Please Note: The addition of the termite additive where requested as part of the RMAX Direct fix EIFS cladding system, does not preclude the builder from having to install an appropriate termite barrier or termite management system as per the relevant BCA requirements set forth in Australian Standard AS 3660.1

INTRODUCTION

RMAX Direct fix EIFS cladding system Composition

The RMAX EPS EIFS panels are manufactured from expanded polystyrene which is an inert, lightweight, inorganic material. The EPS panels are manufactured in RMAX manufacturing plants across Australia in accordance with the relevant Australian Standard AS1366 Part 3 ~ 1992 Rigid cellular Polystyrene Moulded plastic sheets for Thermal Insulation.

Variation and Modifications to the RMAX Direct fix EIFS cladding system

RMAX does not validate or authorise in any way the use of any non-approved RMAX Direct fix EIFS cladding system components other than those specified in the components list on the previous page. RMAX will not be responsible for the performance of a system when installed outside of the CodeMark accreditation and system limitations and when non-approved components are used. In the event that non approved components have been installed as part of the finished system, this may compromise the systems performance. Where this has been found to have occurred, the product warranty and the Codemark certification that would normally be issued for the installed system will be rendered null and void.

RMAX EIFS Cladding Product Range Description

The RMAX Direct Fix EIFS Cladding Product range of panels are manufactured from Isolite® closed cell EPS bead material (density Grade M orange in colour) that is a resilient, lightweight rigid cellular plastic.

RMAX EIFS Grooved Cladding Panel Product Description

The RMAX Direct Fix EIFS EPS grooved panel product is made up of RMAX Isolite EPS panels (M grade density orange in colour) that incorporate a patented dove tail groove design on one side of the panel which can be applied in two different orientations depending on customer preference and or installation. The grooves in either orientation provide improved anchoring of the applied OB Plus render finishing system to the panel face and also act as a convenient locator for the OB class 4 fixing screws and OB washers resulting in greater ease of installation to the frame. Refer to page 6 for panel construction diagram.



Photo 1. Installed RMAX Direct Fix EIFS EPS Grooved Cladding panels.



Photo 2. Vertical groove orientation running along the length of one side of the panel at 75mm spacings.

Option 1: Vertical Groove

The patented dove tail groove design runs vertically down the length of one face of the panel at equal spacings of 75mm as indicated in photo 2.



Photo 3. Horizontal groove orientation running across the width of the panel at 75mm spacings.

Option 2: Horizontal Groove

The patented dove tail groove design runs horizontally across the width of one face of the panel at equal spacings of 75mm as indicated in photo 3.

RMAX EIFS Pre-Rendered Cladding Panel Product Description

The RMAX Pre-Rendered RMAX Isolite EIFS EPS Cladding panels are made up of RMAX Isolite™ EPS panels (M grade density orange in colour) core reinforced with high strength alkaline resistant OB 160gsm fibreglass mesh and the enhanced RMAX Orange Board™ Plus render surface coating (grey in colour), to provide strength and high impact resistance.

The RMAX Pre-Rendered panels offer the RMAX Orange Board™ Plus pre rendered coating on one face of the panels.



Photo 4. RMAX EIFS Pre-Rendered Cladding Panels.

DESIGN CRITERIA

RMAX EIFS Cladding Panel System Product Description

The RMAX Direct Fix EIFS Cladding panel system is distributed to market as a fully accredited RMAX EPS EIFS cladding system comprising the RMAX Isolite EPS cladding panel, (M grade density orange in colour) together with the RMAX Orange Board™ Plus Render and RMAX Orange Board™ fasteners, screws and washers. For Bush Fire Attack Level (BAL 29) conformance to be applicable, the RMAX Direct Fix EIFS Cladding system must be installed with the RMAX EPS EIFS cladding panel in conjunction with the Orange Board™ fasteners, screws and washers and the proprietary RMAX Orange Board™ Plus Render system. Refer to page 8 for more information.

RMAX EIFS Cladding Appraisals

The full range of RMAX EIFS Cladding panels have been subjected to extensive testing and validation to comply with all applicable Australian building standards, codes and practices. For a full list of referenced tests and reports, refer to page 41.

Compliance

All design and construction must comply with the appropriate requirements of the current Building Code of Australia (BCA) regulations (Volume 2) for Class 1 and Class 10 Buildings and any specific requirements of your local Building Authority.

Installation Design

All installation, erection and fixing requirements must be in accordance with the details contained in this manual and the requirements of your local Building Authority.

The RMAX Direct Fix EIFS cladding product range has been designed specifically for application in the second storey of Class 1 and 10 Residential building constructions only and cannot be installed in any ground floor or single storey applications. Where it is desired for an RMAX EPS EIFS cladding system to be installed as external cladding on the ground floor of a double storey residential construction or on a single storey residential construction, the RMAX Ground Floor EIFS system is to be installed.

Please refer to the RMAX Ground floor EIFS technical installation brochure for ground floor or single storey EIFS cladding installation. The RMAX Ground floor EIFS technical data and installation manual can be downloaded directly from the RMAX website at www.rmax.com.au

Frame Structure

The frame structure must be built in accordance with the Building Code of Australia (BCA) and with all relevant Australian Standards that may apply such as AS 1684 - Residential Timber Framed Construction. Metal framing must comply with: AS 3623 - Domestic Metal Framing - A cold-formed steel frame constructed in accordance with NASH Standard for Residential and Low-rise Steel Framing, Part 1: Design Criteria.

NOTE: The RMAX Direct Fix EIFS system is non structural and doesn't contribute to the structural integrity of the frame once installed. Hence, structural bracing must be installed as part of the integral wall frame.

Framing Specification Compliance

In all cases, it is a requirement that the RMAX Direct Fix EIFS system incorporates a supporting frame compliant with BCA requirements, e.g. The AS 1684 suite of standards for Residential timber-framed construction for cyclonic and non-cyclonic areas (where minimum framing member dimensions may be less than those referenced in the testing referenced in Appendix D so long as the minimum screw penetration depth into the stud is maintained); or, NASH Standard for Residential and Low-rise Steel Framing with minimum stud specification of 0.75 mm BMT G550 for non-cyclonic applications. For cyclonic applications, while the strength of the RMAX Direct Fix EIFS system has been verified for a 10G screw/washer combination, the strength of the screw-to-steel-frame connection must be independently verified.



Photo 5. Complete RMAX Orange Board™ Plus render finished EIFS Cladded wall.

DESIGN CRITERIA

RMAX EIFS EPS Panel Fasteners

Each fastener is composed of:

- 1 galvanised steel screw (class 4)
- 1 plastic washer (Orange in colour)

Details of each component are given in Table 1.

Table 1: Panel fixing components details

Fasteners	Timber frame	Steel frame
Screw (75mm panel)	10G x 100mm CSK Head Coarse Ribbed Class 4 Needle Point	10G x 90mm Wing Tek Class 4
Screw (100mm panel)	10G x 125mm CSK Head Coarse Ribbed Class 4 Needle Point	10G x 115mm Wing Tek Class 4
Washer	45mm diameter plastic RMAX OB washer (orange in colour)	

NOTE: Screw length is dependant on the thickness of RMAX EPS EIFS Cladding panel used. As a guide, the screw should be minimum 25 mm longer than the panel thickness for timber frame construction and 15 mm longer than the panel thickness for steel frames. The screw offset from the edge of the panels and the panel joints is be 20mm. Where two panels butt up again each other, edge to edge, a double stud is to be used, allowing each panel to be fastened to own individual stud. Refer to fastener fixing details on pages 22, 23 and 24 for further information.

Wind Pressure Design

The capacity of the RMAX Direct Fix EIFS Cladding range of products, as evaluated in accordance with the relevant Australian Standards (AS 4040.0, AS 4040.2, AS 4040.3), to resist against different categories of wind from Regions A, B (Non-Cyclonic) and C, D (Cyclonic) (see Figure 1 below) as required by the BCA and defined according to AS/NZS 1170.2:2011 and AS 4055-2006 was obtained by several tests performed in accredited Laboratories. Refer to page 41, reference no. 9.

The limitations of the following fixing provisions are:

- Building height to eaves or ridge less than or equal to 10.00 m. Domestic dwellings of 1 to 2 stories only.
- Buildings built in terrain categories 1 to 3.
- Buildings built on topographic classification T1 (AS 4055-2006).

The provisions of the fixing for the different non cyclonic wind regions A and B are defined in Table 2 below.

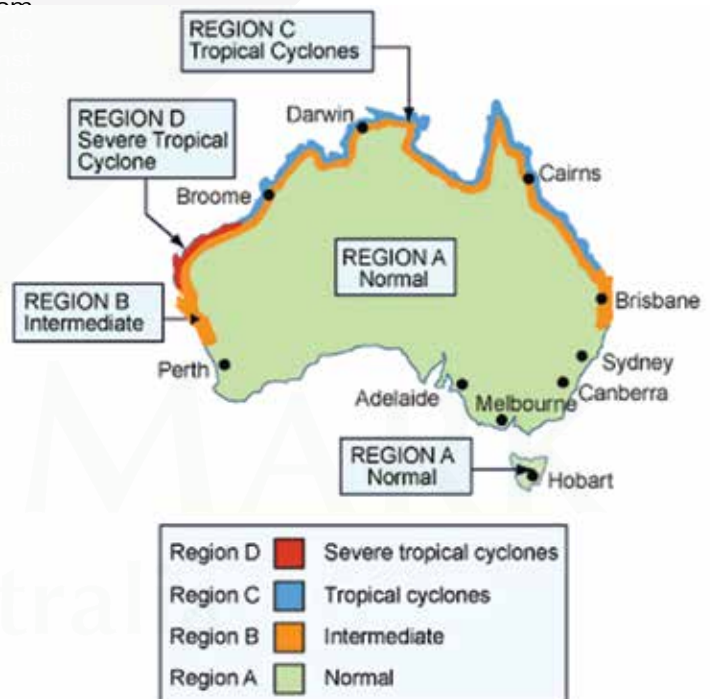


Figure 1. Wind Region designation around Australia. Refer to the BCA table 1.1.1 Design Wind Speed-Equivalent Values for more information.

Table 2: Minimum stud and fastener spacing for the RMAX Direct Fix EIFS Cladding Product Range in accordance with AS 4055-2006.

Wind Regions	Non-Cyclonic (A and B)				
Wind category	N1	N2	N3	N4	N5
Panel Thickness (mm)	75, 100				
Max. Stud spacing (mm)	600			450	
Fastener spacing (mm)	300				200

DESIGN CRITERIA

Table 3: NCC 2019 Climate Zone Requirements
NCC 2019, BCA Vol 2, Table 3.12.1.3a

Climate Zones	1, 2,3	4, 5,	6,7	8
Minimum Total R-Value for External Walls	Typical wall - R2.8 - R2.4 Shaded with a projection angle of: 15 degrees	Typical wall - R2.8 - R2.4 Shaded with a projection angle of 15 degrees	Typical wall - R2.8	Typical wall - R3.8

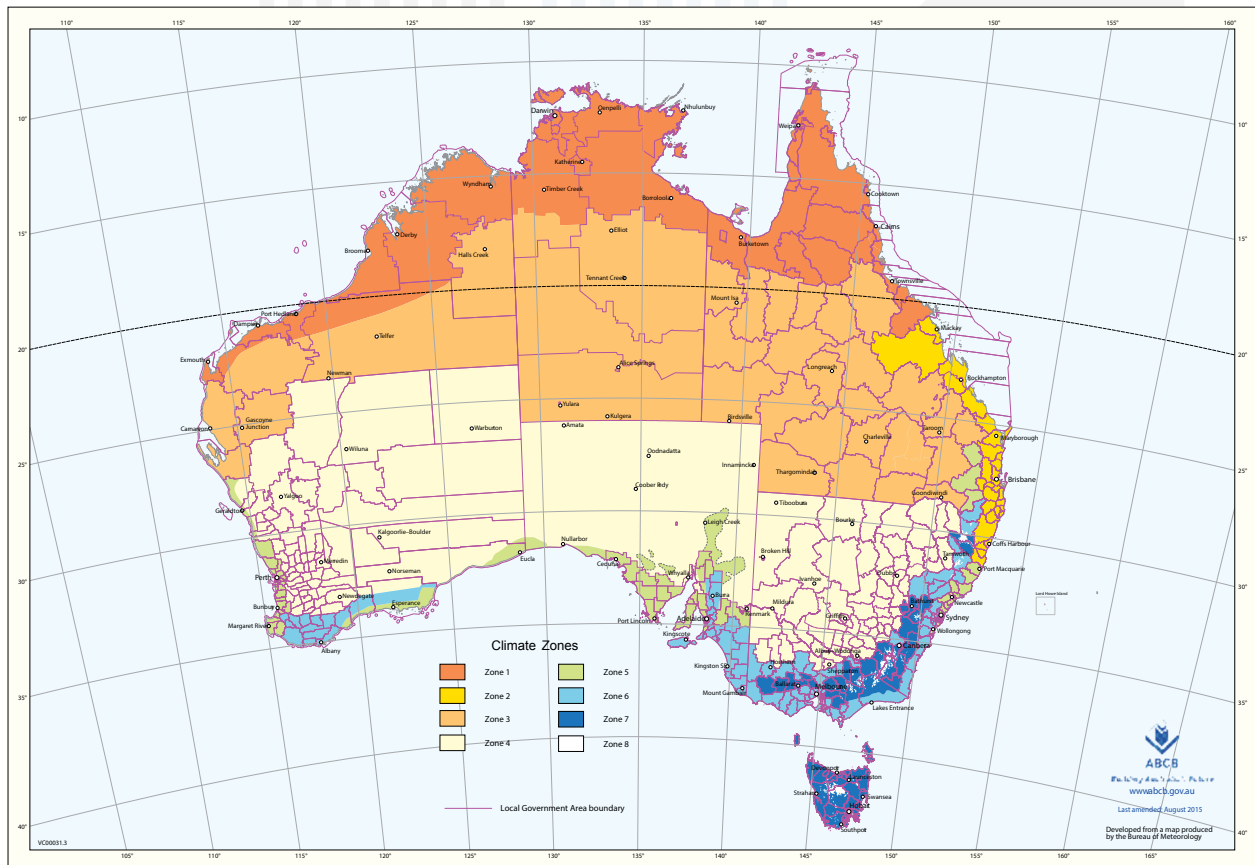


Figure 2. ABCB Climate Zone Map.

The RMAX Direct fix EIFS cladding system utilising a 75mm thick EPS EIFS panel achieves compliance to the NCC 2019 Climate requirements for minimum R-Value performance of external walls in climate zones 1 through 5. Compliance to minimum R-value performance in climate zones 6 and 7 can be achieved with the addition of R 0.5 and higher insulation batts being installed in the stud cavity. Compliance to minimum R-value performance in climate zone 8 can be achieved with the addition of R 1.5 and higher insulation batts being installed in the stud cavity.

The RMAX Direct fix EIFS cladding system utilising a 100mm thick EPS EIFS panel achieves compliance to the NCC 2019 Climate requirements for minimum R-Value performance of external walls in climate zones 1 through 7. Compliance to minimum R-value performance in climate zone 8 can be achieved with the addition of R 0.5 and higher insulation batts being installed in the stud cavity.

TECHNICAL SPECIFICATIONS

Standard Tolerances

Table 4: Panel Dimensions

Panel Dimensions Thickness: X Length X Width
75 mm X 2500 mm X 1200 mm
100 mm X 2500 mm X 1200 mm
Tolerance Panel Length and Width = +/-2 mm
Tolerance Panel Thickness = +/- 1mm
The surface mass of each panel is indicated in Table 5. Panel sheet weights are shown Table 6.

Table 5: Nominal panel surface mass (kg/m²) – unrendered (M grade density)

Thickness (mm)	Surface Mass (kg/m²)
75mm x 2500mm x 1200mm	1.43
100mm x 2500mm x 1200mm	1.90

Table 6: Sheet weight in kg – unrendered (M grade density EPS panel only)

75mm	100mm
4.3 kg	5.7 kg

Figure 3:
RMAX EPS EIFS
Cladding Panel

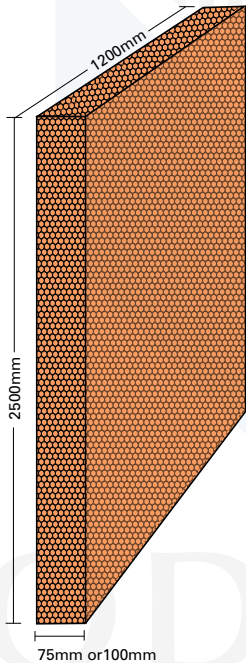


Figure 4: Example of the installed RMAX EPS EIFS
Pre-Rendered and Plain Cladding Panel.

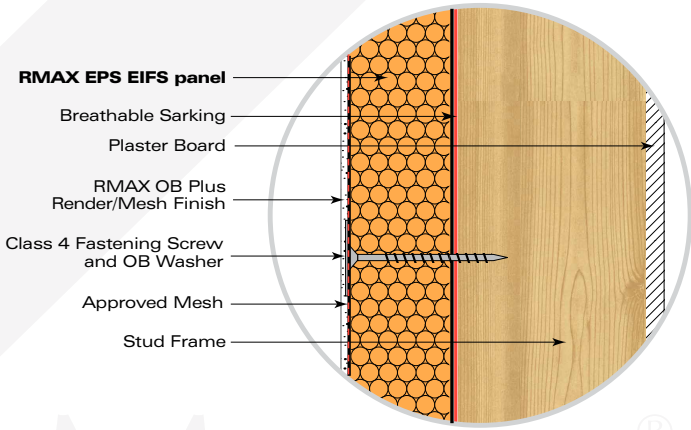


Figure 5:
RMAX EPS EIFS
Grooved Cladding
Panel

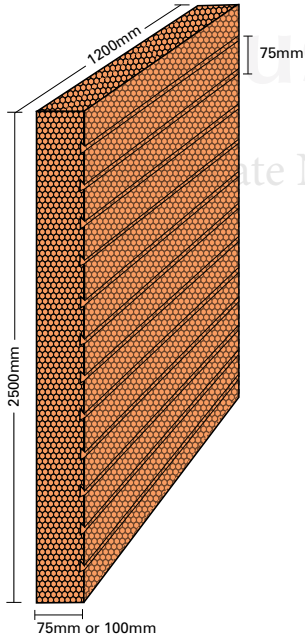
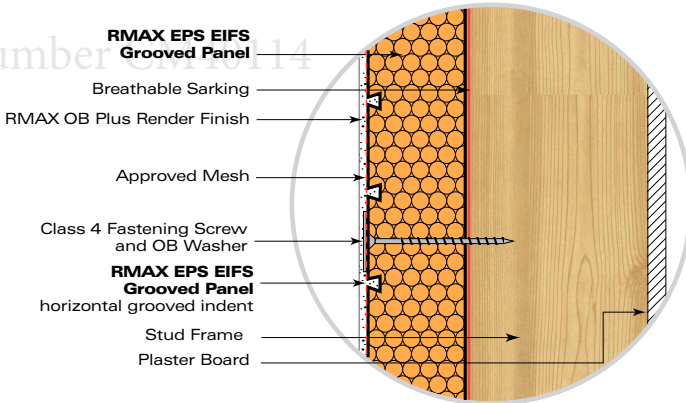


Figure 6: Example of the Installed RMAX EPS EIFS
Grooved Cladding Panel.



NOTE: DRAWINGS NOT TO SCALE

TECHNICAL SPECIFICATIONS

Thermal Insulation

Table 7: R value of RMAX Direct Fix EIFS EPS Panel

Panels thickness	75mm	100mm
Thermal conductivity at 23°C (W/m²K)	0.037	
R value at 23°C (m²K/W)	2.09	2.79

RMAX Direct Fix EIFS Cladding Wall System Thermal Performance.

From calculations in accordance with AS/NZS 4859.1:2018, the total R value for the RMAX Direct Fix EIFS Cladding wall systems are given in the opposite table.

Note: The R value calculations opposite are based on a standard wall system construction comprising of 10mm thick plaster board, 90 mm timber stud frame, breathable sarking (wall wrap) and the RMAX Direct Fix EIFS EPS Cladding panels in the prescribed thicknesses as indicated with a nominal 5mm thick RMAX Orange Board™ Plus render finish coating applied.

Table 8: Total R value of the RMAX Direct Fix EIFS EPS Cladding wall system

Total R value of the RMAX Direct Fix EIFS EPS Cladding wall system			
Standard Cladding panel thickness (mm)	Total R value Summer (m²K/W)	Total R value Winter (m²K/W)	Total R value Average (m²K/W)
75	2.48	2.61	2.54
100	3.17	3.32	3.25



TECHNICAL SPECIFICATIONS

Bushfire Attack Level (BAL)

After the Canberra bushfires in 2003, the Australian Standard relating to building was reviewed and a new Australian Standard (AS 3959) Construction of Buildings in Bushfire prone areas was introduced nationally in 2009. The revised building standard has 5 risk levels (Bushfire Attack Levels-BALs). These being BAL12.5, 19, 29, 40 and BAL Flame Zone (FZ). There are increasing construction requirements that range from ember protection at the lower BAL levels to direct flame contact protection at the highest. The AS3959 standard increases the construction requirements on residential buildings so they are better bushfire protected.

Products used in external construction of houses should have a minimum BAL rating to ensure that building is undertaken in such a way that risk to people and property is minimised. It is a legislative requirement that a person or organisation who has suitable qualifications and experience undertakes the BAL assessment. RMAX commissioned Exova Warringtonfire, a


NATA accredited testing authority, specialising in BAL testing and certification to undertake their BAL 29 conformance testing.

The RMAX Direct Fix EIFS cladding system has been tested for heat intensity and ember attack of bushfires in relation to AS 3959-2009. In doing so the RMAX Direct Fix EIFS system has met the requirements of AS 1530.8.1:2007 and is approved for use in bushfire prone areas up to and including BAL 29 as per information contained in the Exova BAL29 conformance certificate below.

To meet the BAL 29 conformance requirements as tested by Exova Warringtonfire, RMAX Orange Board Plus™ render must be used and applied over the RMAX EPS EIFS panels at a minimum thickness of 5mm. Furthermore The AS3959 standard for construction in bush-fire prone areas specifies all joints in the external surface material of walls shall be covered or sealed, to prevent gaps no greater than 3mm.

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Testing. Advising. Assuring.



EWFA CERTIFICATE OF ASSESSMENT		CERTIFICATE No: SFC 47899700.5 Page 1 of 1	
Report Sponsor	Certificate Issue Date	Product Name	
RMAX 2-4 Mephan Street Maribyrnong VIC, 3032	24/07/2018	RMAX Orange Board RMAX Thermawall RMAX ThermoWall Plus RMAX ThermoSilver Board RMAX Thermawall Silver RMAX ThermoWall Plus Silver PERIPOR® 300E EPS	
Assessment Report Reference	Referenced Standard	Report Issue Date	Report Validity Date
EWFA 47899700.5	AS 1530.8.1-2007	24/10/2018	31/08/2022
Introduction			
The element of construction described below was assessed by this laboratory on behalf of the report sponsor in accordance with the stated test standard and achieved the results stated below. Refer to the referenced test report(s) or Regulatory Information Reports for a complete description of the assessed construction.			
Assessed Framed Wall system description and performance			
Framed wall Description			BAL
The scope of the assessment includes the bushfire resistance performance of a framed wall system incorporating various rendered RMAX panels when tested in accordance with AS1530.8.1-2007 as appropriate for external walls. The assessed external wall system consisting of: <ul style="list-style-type: none"> Timber framing or light gauge steel framing at least 70mm deep. Unexposed side faced with 10mm Gyprock plasterboard. Exposed side faced with 4.8mm minimum thickness RMAX OB Plus Orange Board render system coated over optionally M or X28 density grade 75mm or 100mm thick RMAX Orange Board or 28g/l PERIPOR® 300E EPS Board, RMAX ThermoWall Board, RMAX ThermoWall Plus Board, RMAX ThermoSilver Board, RMAX ThermoWall Silver Board or RMAX ThermoWall Plus Silver Board. Render mesh shall optionally be RMAX OB Ultra impact mesh or RMAX OB fibre glass Render Mesh Starting channel and meshed external angle shall optionally be made of PVC or aluminium alloy. Optional inclusion of X28 EPS Battens 40mm wide with thicknesses optionally from 10 to 25mm attached to framing for all systems, the EPS panels are then fastened to the stud frame through the EPS battens. Optional construction shall include a direct fix method, where the EPS panels are fixed directly to the stud frame. Sarking type to be generic in specification and installation. RMAX aluminium starter channel system incorporating 4.5mm thick x 100mm wide fibre cement sheeting coated with Supersec 2413 waterproofing membrane optionally replacing PVC starter channels Refer the referenced assessment report No. EWFA 47899700.2 and R & D Test Reports EWFA 50050500.1 & EWFA 55326400.2 for a complete description of the assessed construction and EWFA 27710-05 referenced in the report for previously assessed variations.			BAL: A29
Conditions/Validity			
<ul style="list-style-type: none"> THIS CERTIFICATE IS PROVIDED FOR GENERAL INFORMATION ONLY AND DOES NOT COMPLY WITH THE REGULATORY REQUIREMENTS FOR EVIDENCE OF COMPLIANCE. Reference should be made to the relevant test report or regulatory information report to determine the applicability of the test result to a proposed installation. Full details of the constructions and justification for the conclusions given, along with the validity statements, are given in the assessment reports. The assessment report or short form assessment report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the performance of the actual products supplied. It is intended to provide a brief outline of the above referenced assessment reports and not to replace them. The conclusions in this certificate of assessment relate to the configurations as detailed, and should not be applied to any other configuration. The conclusions expressed in this document assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions. Full copies of the assessment and relevant test reports may be obtained from the sponsor. 			
TESTING AUTHORITY		Reviewed By:	
Exova Warringtonfire Aus Pty Ltd		 T. Bhat	
Address Unit 2, 409-411 Hammond Road, Dandenong Victoria 3175, Australia			
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Authorisation		Prepared By:	
 H. Wong			

Figure 7. RMAX Exova BAL29 Certificate.

TECHNICAL SPECIFICATIONS

Early Fire Hazard Properties (AS/NZS 1530.3-1999)

From tests conducted by AWTa, Division of Building Material – NATA Accreditation # 1356, the following indices given in Table 9 have been determined.

Table 9: Early Fire Hazard Properties of the RMAX Direct Fix EIFS Cladding Product Range EPS Panel

Material	Ignitability Index (0-20)	Spread of Flame (0-10)	Heat Evolved Index (0-10)	Smoke Produced Index (0-10)
RMAX EPS EIFS Cladding Panel M grade 19g/L	7	0	1	4

NOTE: The core material in all RMAX Direct Fix EIFS Cladding Products is expanded polystyrene. As with all other organic material, insulation products must be considered combustible and to constitute a fire hazard if improperly used or installed. Each of the RMAX Direct Fix EIFS Cladding Product Range of panels contains a flame retardant additive to inhibit accidental ignition from small fire sources.

Table 10: RMAX Direct Fix EIFS Cladding Product Range Weighted Sound Reduction Index (Rw) Performance

Panel Thickness	Construction	Rw
75mm	75mm Panel only + frame + sarking	12dB
75mm	75mm Panel + 8mm thick render + sarking + frame + 10mm thick plaster. (Full wall system)	38dB

Table 11: Perceived Change In Decibel Levels

Change in Sound Level	Perceived Change to the Human Ear
+ - 1dB	Not perceptible
+ - 3dB	Threshold of perception
+ - 5dB	Clearly noticeable
+ - 10dB	Twice (or half) as loud
+ - 20dB	Fourfold (4x) change

NOTE: The threshold of perception of the human ear is approximately 3 decibels. A 5 decibel change is considered to be clearly noticeable to the ear whilst a 10 decibel change would be perceived to be twice as loud.

Material Handling

The RMAX Direct Fix EIFS Cladding Product Range of panels should be stored elevated, under cover and laid flat. **Edges and corners of the panels are to be protected at all times. The RMAX Direct Fix EIFS Cladding wall panels should be rendered within 48 hours after installation to the frame.** Prolonged exposure to the elements should be avoided, including exposed edges.

UV Exposure

Continuous exposure to the elements of unrendered RMAX Direct Fix EIFS Cladding panels may result in product deterioration causing minor fretting of the exposed edges of the panels. Therefore, if the RMAX Direct Fix EIFS Cladding panels are to be stored outside for extended periods of time prior to installation, the individual panels or panel stacks should be completely covered by a canvas or Ultra Violet light (UV) resistant type material. **Under no circumstances however should a clear plastic cover be used to cover the panels.**

High Wind Exposure

When handling or installing the RMAX Direct Fix EIFS Cladding panels in windy conditions, particular care should be taken. Due to the light weight nature of the panels, unsecured panels can be severely damaged or may cause damage in windy conditions.

Heat Exposure

As EPS foam will begin to soften and shrink when exposed to elevated temperatures above 80°C, the RMAX Direct Fix EIFS Cladding Product Range of panels and render finished wall facades should not be continuously exposed to temperatures in excess of 80°C, as expansion and blistering of the panels and or rendered wall may occur. Thus it is highly recommended that **any equipment that generates high levels of radiant heat such as outdoor barbecues or outdoor patio gas heaters etc, should be kept at a minimum of 2 metres away from any exposed RMAX Direct Fix EIFS Cladding Product Range cladded panel wall.**

Chemical Resistance

RMAX Direct Fix EIFS Cladding Panels are chemically resistant to most water based materials. Resistance to diesel fuel, paraffin oils and vegetable oils however is limited, thus prolonged contact should be avoided. **EPS will however be attacked by hydrocarbons, ketones, esters and solvents. Exposure to these chemicals should be completely avoided.** Refer to the RMAX Isolite® EPS Material Safety Data Sheet for further details regarding storage and handling and compatibility with other chemicals. The RMAX Isolite™ EPS data sheet can be provided upon request.

TECHNICAL SPECIFICATIONS

Impact Resistance

The RMAX Direct Fix EIFS Cladding system when installed according to the RMAX specifications and installation manual will provide resistance to most impact loads that are likely to occur in normal residential operating conditions. **In line with good building practice however, a design engineer should always be consulted to assess suitability.** Where a building or structure is likely to be exposed to high impact loads, the use of any of the RMAX range of Direct Fix EIFS Cladding systems may not be appropriate.

The RMAX Direct Fix EIFS cladding product range has been designed specifically for application in the second storey of Class 1 and 10 Residential building constructions only and cannot be installed in any ground floor or single storey applications. Where it is desired for an RMAX EPS EIFS cladding system to be installed as external cladding on the ground floor of a double storey residential construction or on a single storey residential construction, the higher impact resistance, premium grade RMAX Ground Floor EIFS cladding system is to be installed.

Please refer to the RMAX Ground floor EIFS technical installation brochure for ground floor or single storey EIFS cladding installation. The RMAX Ground floor EIFS technical data and installation manual can be downloaded directly from the RMAX website at www.rmax.com.au

Termite and Pest Control

The project manager/ builder must comply with all relevant BCA and local council requirements as they pertain to termite and pest control in accordance with Australian Standard AS 3660.1:2000.

Fire Resistant Level (FRL)

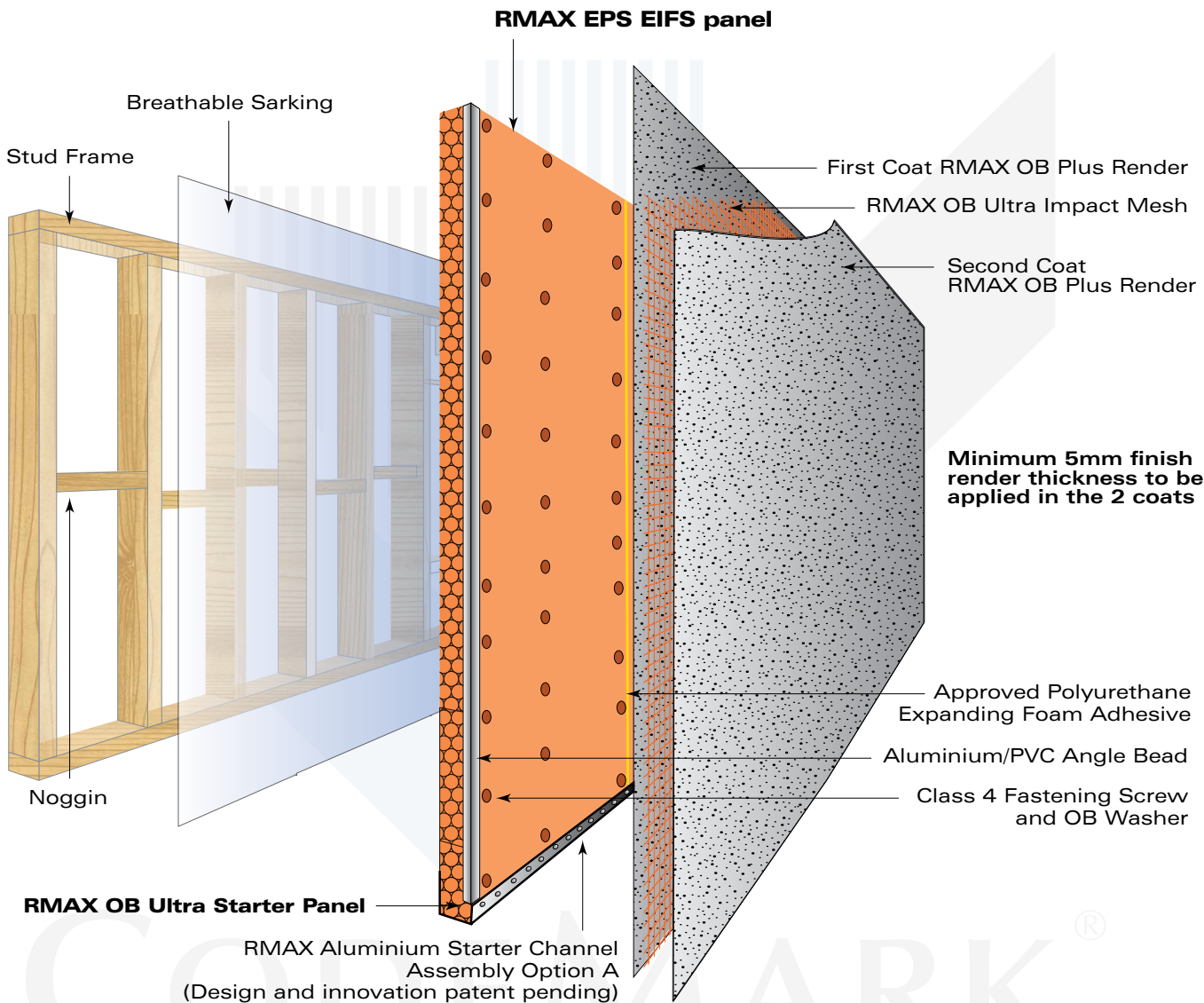
Volume 2 of the BCA (Part 3.7.1) specifies the requirements for residential buildings for minimum fire resistance performance for external walls, where the external wall is located at less than 0.9m from an allotment boundary or less than 1.8m from a separate building structure on the same allotment. In these circumstances where a party or boundary wall requirement exists, a minimum Fire Resistance Level (FRL) of 60/60/60 is required for BCA compliance in Class 1 and 10 buildings.

The RMAX Direct Fix EIFS system is NOT suitable for use as a FRL rated external wall cladding system for boundary walls and / or party walls as a standalone walling system. Where a FRL level / rating is required for such installations, an appropriate FRL rated wall cladding system must be specified.

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INSTALLATION GUIDELINES



Exploded View of RMAX OB Direct Fix EIFS System

Cross Section Detail of RMAX Direct Fix EIFS System

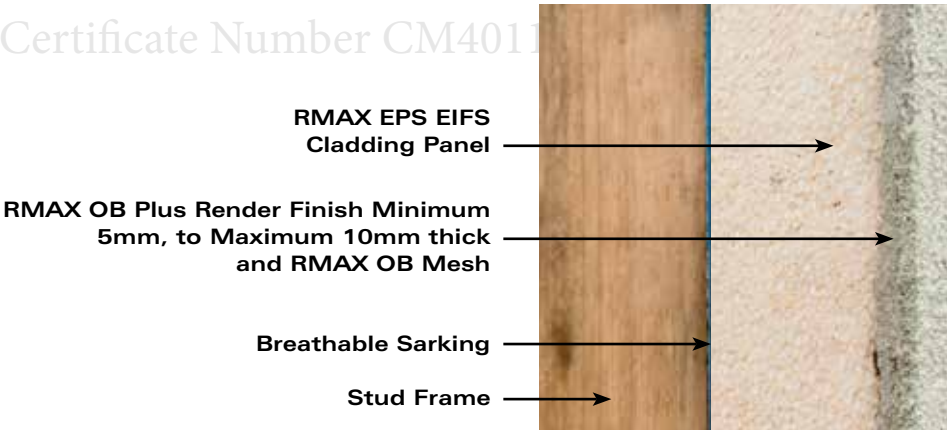


Photo 6. Cross section of complete RMAX Direct Fix EIFS Cladding wall system.

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION GUIDELINES

Product Waste Management

Due to the lightweight nature of the RMAX EPS EIFS cladding panels, all panel off cuts and waste should be collected, secured in appropriate waste collection bags and disposed of in accordance with local council or government regulations.

Before Commencing Installation

Before commencing installation of the RMAX Direct Fix EIFS system, ensure that you have read the RMAX Direct Fix EIFS system Technical Specification and Installation Manual in full.

Penetrations

All penetrations are a potential source of water ingress and spread of fire if not properly installed and are therefore required to be properly sealed with an approved fire rated flexible sealant such as Fire Sound acoustic Fire Rated sealant. Back blocking should be installed to allow for attachment of items that may be required such as electricity meter boxes, external taps, external light fittings, HVAC connections, balustrades and other building services.

Placement of Expansion / Control Joints

Prior to installation of the RMAX Direct Fix EIFS system Cladding Panels to the stud frame, determine expansion joint placement by consulting with a Design Engineer to calculate the deformation / stress due to soil / structure movement, deflection due to load bearing on roofing structures and to specify location of expansion/control joints.

Placement Guide: Expansion joints must occur where any of the RMAX EPS EIFS Cladding Product Range of panels meet other substrates / cladding materials.

The following is a guide only and does not negate the user's responsibility to consult a Design Engineer.

In line with good building practice, placement of vertical expansion joints should not exceed 5 metres where the wall length is greater than 8 metres. Joints should be placed to align with large door and window openings and internal corners. Double studs are necessary at all vertical expansion joints.

Vertical expansion (Control) joints must be continuous across all panels. i.e. They must be continuous from the top of the wall to the bottom of the wall and must cut across the RMAX EPS EIFS panel and Starter Channel.

Typical vertical control joints are nominally 10mm-12mm wide and horizontal control joints are nominally 15mm-20mm wide and filled with an approved paintable flexible sealant.

Spacing of horizontal expansion joints should not exceed 3 metres.

For expansion joint installation details please see pages 26 and 27.

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INSTALLATION GUIDELINES

Planning

Prior to installing any of the RMAX Direct Fix EIFS Cladding Product Range of panels, liaise with the builder to enable solid blocking to be installed where fixtures are to be fitted to the finished construction; e.g. balustrade, handrails, clothes lines, large light fittings, hot water services, air-conditioning units, etc.

Sarking

RMAX Direct Fix EIFS cladding panels exhibit a very low rate of water vapour transfer. However in line with good building practice, RMAX requires the use of a breathable sarking to be fixed directly behind the RMAX Direct Fix EIFS Cladding panels.

Breathable wall wrap (sarking) to be stapled directly to stud frame as indicated. Stud frame to be completely wrapped in breathable sarking, ensuring that there is at least 150mm overlap between two different sheets / rolls of sarking. **Building wrap must comply with AS/NZS 4200.1 and AS/NZS 4859.1 and all relevant BCA 2019 code requirements.**



Photo 7. Installation of Sarking to frame.

Method of Fixing

The RMAX Direct Fix EIFS Cladding Product Range of panels can be installed either vertically or horizontally against the stud frame. The panels are screwed directly to the frame. Screw heads and washers should be slightly recessed into the surface of the panel. **(Note: Care should be taken so as to not overdrive the fixing into the panel as this could strip the OB washer reducing the effectiveness of the fixing). Panels should not be bonded (glued) to studs.** This allows the frame to flex without stressing the external render.



Photo 8. Installation of EIFS Cladding Panels directly to frame over Sarking.

Panel Joints

All joints between the RMAX Direct Fix EPS Cladding Panels should be glued with a suitable polystyrene compatible polyurethane construction adhesive. Contact your local RMAX distributor for a list of compatible polyurethane construction adhesives. Ensure that the adhesive is applied on the exposed end of an already fastened panel. The next panel to be installed should then be positioned so that it is butted up hard against the already installed panel with the polyurethane foam adhesive already applied. The polyurethane foam adhesive will expand to fill any gaps between the panels as it cures. This helps to maintain water and weather tightness of the system.



Photo 9. Adhesive Foam application to panel ends.

Back Blocking of Stud Joins

Where RMAX Direct Fix EIFS Cladding Panel sides or ends do not finish on a stud, solid back blocking should be installed to strengthen and align panel joints. Back blocks are cut from off cuts of stud material. The back blocks can be placed aligned with the join or placed at 300mm centres perpendicular to the join. Back blocks are to be nailed securely to the frame.

Where possible, double studs are required to be installed in accordance with the diagram on pages 22 through 24, whenever two RMAX Direct Fix EIFS Cladding Panels butt up to each other. Where panel joints occur other than at the stud interface, double back blocking is to be installed to ensure that each RMAX Direct Fix EIFS Cladding Panel is fastened to its own individual block. Where the end of an RMAX Direct Fix EIFS Cladding Panel does not line up with a stud and does not adjoin another RMAX Direct Fix EIFS Cladding Panel, a single back block is sufficient. RMAX Direct Fix EIFS Cladding Panels are to be fixed to back blocks in the same manner as fixing panels to the stud frame. Refer to Fastener Positioning detail on pages 22 through 24. Typical Corner and Joint details are to be adhered to. Refer to pages 21, 25 and 26

INSTALLATION GUIDELINES

RMAX Pre-Rendered EIFS Cladding Panel Mesh Installation

(Below information only applicable to Pre-Rendered EIFS Cladding Panels)

After installation of the pre-rendered panels to the stud frame, reinforce all panel joints with a 150mm minimum wide fibreglass strip of alkaline resistant 160g/m² mesh trowelled over panel joints during first base coat render. The fibreglass strip is to be applied evenly and run the full length of the joints. Ensure that the panels are butted up hard against one another. Refer to Fastener Positioning detail on pages 22 through 24. Typical Corner and Joint details are to be adhered to. Refer to pages 21, 25 and 26.



Photo 10. Panel joints with separate 150mm wide 160gsm fibreglass mesh strips applied directly over joints. **(Only applicable to pre-rendered panels).** All pre-rendered cladding panel joints to have reinforcing mesh applied over them as shown.

Plain and Grooved EIFS Cladding Panel Mesh Application

Apply a 2-3mm basecoat of the RMAX Orange Board™ Plus render system onto the RMAX Direct Fix EIFS Cladding Panels using a steel trowel with enough pressure to adhere the product. Whilst the basecoat is wet, embed a full layer of alkali resistant Orange Board™ 160gsm (5mm x 5mm), woven fibreglass mesh ensuring that the mesh pieces overlap by a minimum of 100mm at mesh joints.

RMAX Direct Fix EIFS Cladding Panel joints should be evenly covered with the same embedded mesh (avoid overlap of mesh joints near the main panel joint). Strips of mesh at 45 degree angle or equivalent, 400mm long by 200mm wide, should be embedded across the corner of all window and door openings. Refer to page 21 window application detail. In the same sequence apply another coat of RMAX Orange Board™ Plus render at a thickness of 2-3mm on top of the full mesh, embedding the mesh between these two layers of render. Use a straight edge and screed surface or if using a polystyrene float, finish the surface to achieve an even and true surface. **Do not render over control joints.**



Photo 11. Embedding of Fibreglass Mesh into first render coat.

Cutting of Panel

For a clean, fast, accurate and no mess cut, we recommend using a standard diamond masonry blade or fibre cement blade to cut the RMAX Direct Fix EIFS Cladding Panels. For more intricate cuts a hot knife or handsaw can be used.

Installation of External Beads and Angles

All 90° angle corners must be protected with an approved aluminium or PVC bead. Any exposed edges (roof line, windows, doors, edge of concrete slab, etc.) should be covered with fibreglass mesh as specified on pages 25, 26, 28 and finished with an aluminium or PVC bead, which will protect the panel and provide a clean finish line for coatings.

Aluminium or PVC meshed corner angles should be affixed directly to all RMAX EPS EIFS panels where two RMAX EPS EIFS panels butt up and intersect at external or internal corners as per the details on page 21 and 25.

The corner beads should be installed directly to the RMAX EPS EIFS panels using either Selleys Liquid Nails Fast Grab or Selleys Liquid Nails Instant Hold construction adhesive as per the details shown on page 21. **(Polyurethane foam adhesive cannot be used for this particular application).**

Apply a 3-4mm thick bead of Selleys Liquid Nails down the centre of both sides of the angle before positioning the angle up against the RMAX EPS EIFS panel edge. Where a corner angle junction occurs (window or door corner) cut a 45 degree angle on both intersecting ends of the angle so that the ends of the bead will sit flush against one another (mitre joint).

Once the corner angles have been installed around the door or window reveals, wipe off any excess adhesive that may be protruding through the perforated openings in the angle and check that the angles are straight and level using a spirit level gauge.

NOTE: External beads must be installed where ever RMAX EPS EIFS panels have been installed such that they are adjacent to another building substrate i.e. brick, timber, concrete etc.

INSTALLATION GUIDELINES

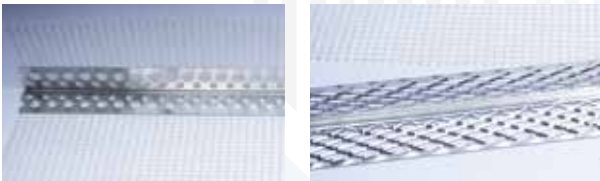


Photo 12. Aluminium and PVC External Angles.

RMAX Starter Channel installation (design and innovation patent pending)

The RMAX Starter channel Assembly Option A (design and innovation patent pending) is to be installed such that it sits in line with the bottom of the floor joist. The starter channel is to be affixed with screws to the ends of the floor joists above flashing. Where required, back blocking may need to be installed to facilitate fastening of the starter channel to the bottom of the floor joist as shown in the roof junction detail on page 31.

A minimum 10mm gap must be maintained above the roof surface (be that tiles, colorbond sheeting or other roofing material). Depending on the roof pitch, this gap may vary.

The channels are to be butt joined and sealed at the junction with an approved polyurethane sealant. Fire sound fire rated sealant to be applied along the back edge of the starter channel which is coming into contact with the floor joist end. Ensure that the sealant when applied does not cover any of the weep slots in the starter channel.

When installing the RMAX starter channel Assembly Option A (design and innovation patent pending) above a deck, flat or pitched roof, ensure a gap is maintained between the bottom of the RMAX starter channel assembly option A (design and innovation patent pending) and the finished level.



Photo 13. RMAX aluminium Starter Channel assembly option A (design and innovation patent pending).

Ensure that the sarking bottom edge is sitting on the inside of the RMAX starter channel assembly option A. This installation detail ensures that any water that drains down the face of the sarking will be collected within the starter channel and will be able to effectively drain out through the weep slot design at the base of the channel assembly. Refer to roof junction detail on page 31. For further details.

Expansion (Control) Joints

Prior to installation, determine expansion joint placement by consulting with a Design Engineer to calculate the deformation/stress due to soil/structure movement, deflection due to load bearing on roofing structures and to specify location of expansion/control joints. **Expansion joints must occur where the RMAX Direct Fix EIFS Cladding Panels meet other substrates/cladding materials. Vertical expansion (control) joints must be continuous across all panels. i.e. They must be continuous from the top of the wall to the bottom of the EIFS panel and must cut across the Starter Channel.** This technical manual provides some practical details to perform the expansion joint. Refer to page 27 for more information.

Corner Details

Corners are butt joined and glued together with polyurethane expanding foam adhesive. Refer to page 21 and 25 for corner details.

Internal and External Window Details

The RMAX OB EIFS panels are to be affixed to the window sill, head and jam as per details shown on page 28.

An 8-10mm gap should be left underneath all window sills to allow for fitment of external trims to be installed around window. Once trims have been installed, the gap is to be filled with an approved polyurethane construction foam adhesive. Once cured cut away adhesive such that it is flush with the bottom of the window. This process will allow for adequate fall to be maintained on the window sills once rendered.

Parapet Detail

Metal flashing is required for waterproofing. Refer to pages 35 and 36 for parapet installation detail.

Balcony & Terraces

Please refer to the Drawings on page 38 for balcony construct and installation details.

INSTALLATION GUIDELINES

RMAX Orange Board™ Plus Render to be applied strictly in accordance with the render manufacturer's installation instruction requirements, in 2 coats, at a minimum thickness of 5mm and a maximum thickness of 10mm to ensure compliance to BAL 29 and Codemark™ Certification requirements.

RMAX ORANGE BOARD® PLUS RENDER SYSTEM PRODUCT DESCRIPTION

Forming part of the RMAX Direct Fix EIFS Cladding board coating system, RMAX Orange Board™ Plus Dry Mix Render is a superior quality, polymer modified render containing washed and graded medium silica sand, acrylic powder and proprietary additives. RMAX has developed this proprietary render system which can be applied to any and all of its range of cladding wall panels.

RMAX Orange Board™ Plus render provides the ideal base for the subsequent application of a variety of top coats.



Photo 14. RMAX Orange Board™ Plus Render.

Key Benefits

- Factory blended for dependable consistency and performance
- Superior adhesion to EPS base panels
- Eliminates on-site mixing errors
- Just add water - No other additives required

Substrate Preparation

- Ensure RMAX Direct Fix EIFS Cladding Panels have been installed in accordance with the requirements in this brochure.
- Ensure that the RMAX Direct Fix EIFS Cladding Panels and any other surfaces to be rendered are clean and free of any contaminants including oil, mould release, dust, dirt, silicone, mud, grease, salt, efflorescence, animal droppings and any loose or flaking material that may compromise the adhesion of the RMAX Orange Board™ Plus render system
- **RMAX Direct Fix EIFS Cladding Panels should always be rendered within 48 hours (2 days) from time of installation to stud frame.** Prolonged exposure to Ultra Violet (UV) light may cause uncoated RMAX Direct Fix EIFS Cladding Panels to deteriorate, which may lead to failure of the render system.
- **Areas of the wall system not being rendered / coated should be masked and protected from render and coating materials until completion of the job whereby the masking tape can be removed.**

Preparation of Render Mix

- Add approximately 3 litres of clean water to a suitable mixing vessel and slowly add RMAX Orange Board™ Plus Render powder whilst stirring with a power mixer.



Photo 15. Preparation of Render Mix by addition of RMAX Orange Board™ Plus render and water.

INSTALLATION GUIDELINES

- Continue stirring until all lumps have been dispersed and a uniform paste has been achieved.
- Add extra water (as required) to achieve the desired consistency. The final mix should hold a soft peak on the hawk. Mixing the material so that it is too runny or too stiff will make the material difficult to apply and finish.
- Adjust RMAX Orange Board™ Plus Render consistency with a small amount of water and re-stir if necessary. Do not add water after setting has commenced.
- RMAX Orange Board™ Plus render will require approximately 3.5 - 4.0 litres of water per 20kg bag of RMAX Orange Board™ Plus Dry Mix Render for a correct mix ratio to be achieved.
- Allow RMAX Orange Board™ Plus Render to activate for around 3 to 5 minutes prior to application to the RMAX Direct Fix EIFS Cladding Panels.
- Embed all fiberglass mesh / aluminium or PVC trims and angles in the first coat of render.
- All openings such as windows and doors must be diagonally reinforced with 400mm x 200 mm 160 gsm fibreglass strips embedded in the first render coat. Refer page 20.
- Once the initial RMAX Orange Board™ Plus render coat has sufficiently set, apply a second coat of RMAX Orange Board™ Plus Render at a thickness of 2-3mm directly on top of the fibreglass mesh, embedding the mesh between the two layers of render. The application of the two coats of RMAX Orange Board™ Plus Render and embedded fibreglass mesh should bring the total finished render thickness to between 5 - 10 mm. **(5mm is the minimum finished application thickness required).**

Render Application and Finishing

Render Tools and Equipment Required:

- Hawk and steel trowel, polystyrene float, plastic floats, straight edge, sponge, power mixer, masking tapes, drop sheeting. Appropriate personal protective equipment (PPE) to be worn.
- Apply a 2-3mm base coat of RMAX Orange Board™ Plus render on to the RMAX Direct Fix EIFS Cladding Panel using a steel trowel with enough pressure to adhere the product.



Photo 16. Application of first render coat.

- Whilst the render is wet, embed OB 160 gsm alkali-resistant fibreglass reinforcing OB mesh and trowel over to ensure full immersion of the mesh. Where fibreglass mesh strips meet, a minimum 100 mm overlap must be provided. Always avoid overlapping of fibreglass sheet edges at RMAX Direct Fix EIFS Cladding Panel joints, as this may compromise system integrity.



Photo 17. Application of Fibreglass Mesh over first render coat.



Photo 18. Embedding of Fibreglass Mesh into first render coat.

- Use a straight edge and screed surface or if using a polystyrene float, finish the surface to achieve an even and true level surface appearance ready for the application of the primer coat and decorative finish.
- Where possible, freshly applied RMAX Orange Board™ Plus render should be protected from rain or running water for a period of 48 hours.
- **Allow rendered surface to cure for a minimum of 4 days from final render coat application prior to priming. (In cold and or humid / wet conditions a minimum of 7 days curing time is recommended).**



Photo 19. Application of final RMAX Orange Board™ Plus render coat. Total render thickness should be between 5mm and 10mm.

INSTALLATION GUIDELINES

- RMAX Orange Board™ Plus Render should not be applied in hot or windy conditions and should be protected from rain or running water until hard initial set has been achieved.
- **Do not render over control joints.**

RMAX Orange Board™ Plus Render

RMAX takes no responsibility for NON RMAX Orange Board™ Plus render coating performance, BAL performance and effect on surface properties of the RMAX EIFS Cladding Panels. RMAX Orange Board™ Plus Render to be applied strictly in accordance with the RMAX render installation instruction requirements, in 2 coats, at a minimum thickness of 5mm and a maximum thickness of 10mm to ensure compliance to BAL 29 and CodeMark™ certification requirements.

Primer Coat Application

Ensure rendered surface to be primed is dry and free from any loose or flaky material prior to commencing. Where required, remove efflorescence with a wire brush. Apply primer using a brush roller or proper spray equipment at a rate of approximately 5-6 square metres per litre.



Photo 20. Application of primer coat onto finished rendered surface using a brush roller.

Application of Finish Coat

The RMAX Orange Board™ Plus render system is compatible with most acrylic and some cement-based finish coating systems. RMAX recommends the use of the RMAX OB Texture and OB Membrane finishing coating systems in conjunction with the base RMAX Orange Board™ Plus Render System.

Apply selected coating system in strict accordance with the manufacturer's specifications. To maximise longevity of the overall coating system, RMAX recommends the application of an elastomeric membrane with an Light Reflective Value (LRV) of minimum 35%, (light to mid shades only). Always confirm suitability and compatibility of the selected finish texture coating system for application over the RMAX Orange Board Plus render system with the manufacturer, prior to application.

Render top Coat Colour Selection

RMAX advises that the use of dark render colours or shades be avoided where ever possible - Dark colours absorb the suns radiant heat energy much more so than lighter colours resulting in higher average cladding surface temperatures compared to lighter colours. These elevated temperatures can lead to premature deterioration and damage to the render system. In order to avoid this potential for premature deterioration or damage, **RMAX recommends the use of render colours or shades with a minimum Light Reflective Value (LRV) of 35%.**

Pot Life

RMAX Orange Board™ Plus Render will have a pot life of approximately 1 hour from time of mixing. Warmer weather may reduce this time significantly. **Do not add water to mix as it begins to harden.** Addition of water after commencement of set will result in a reduction of strength in the finished render.

Wash Up

Due to the high polymer content, RMAX Orange Board™ Plus Render should not be allowed to dry on tools. **Always clean tools with clean water immediately following use.**

Curing

Whilst the initial set of RMAX Orange Board™ Plus Render will occur in a matter of hours, full coating strength will not be achieved for 28 days from date of final render coat application.

Supply and Packaging

RMAX Orange Board™ Plus Render is supplied in 20 kg plastic multi-lined paper sacks. RMAX Orange Board™ Plus Render can also be supplied in pallet lots.

INSTALLATION GUIDELINES

Table 12: RMAX Orange Board™ Plus Render material technical data

Appearance	Light grey gritty powder with slight odour when mixed.
Application	Hawk and trowel, render machine or hopper gun.
Specific Gravity	2.57 - 2.6
Bulk Density	1600 - 1850 kg/m ³
Particle Size	<2 mm
Flammability	Not applicable
Curing Time	Apply top coat after 4-7 days. Full cure in 28 days.

Shelf Life

RMAX Orange Board™ Plus Render has a shelf life of one year from date of render manufacture, if stored in dry conditions above floor level. See packaging for date of manufacture details.

SAFETY AND HANDLING OF RMAX ORANGE BOARD™ PLUS RENDER

The RMAX Orange Board™ Plus Render raw material is hazardous according to criteria of the National Occupation Health and Safety Commission (NOHSC). Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail. Please refer to RMAX Orange Board™ Plus Render Material Safety Data Sheet before use (available at www.rmax.com.au). When working with render observe the usual precautions for handling cement based mortars and renders including:

- **Avoid inhalation of the dust, wear suitable respiratory protection mask, avoid prolonged skin contact with wet mortar and eye contact (contains sand based crystalline silica).**
- **Wear personal protective equipment (PPE) consisting of protective clothing and safety gloves to minimise skin contact and wear safety glasses / goggles or full face mask when mixing or applying render.**

FIRST AID MEASURES

Ingestion

If swallowed, wash mouth out with water. **DO NOT induce vomiting.** Drink at least two (2) glasses of water or 500mL. Seek medical attention.

Eye

Wash with copious amounts of water for a minimum of 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into non-affected eye. Seek medical attention.

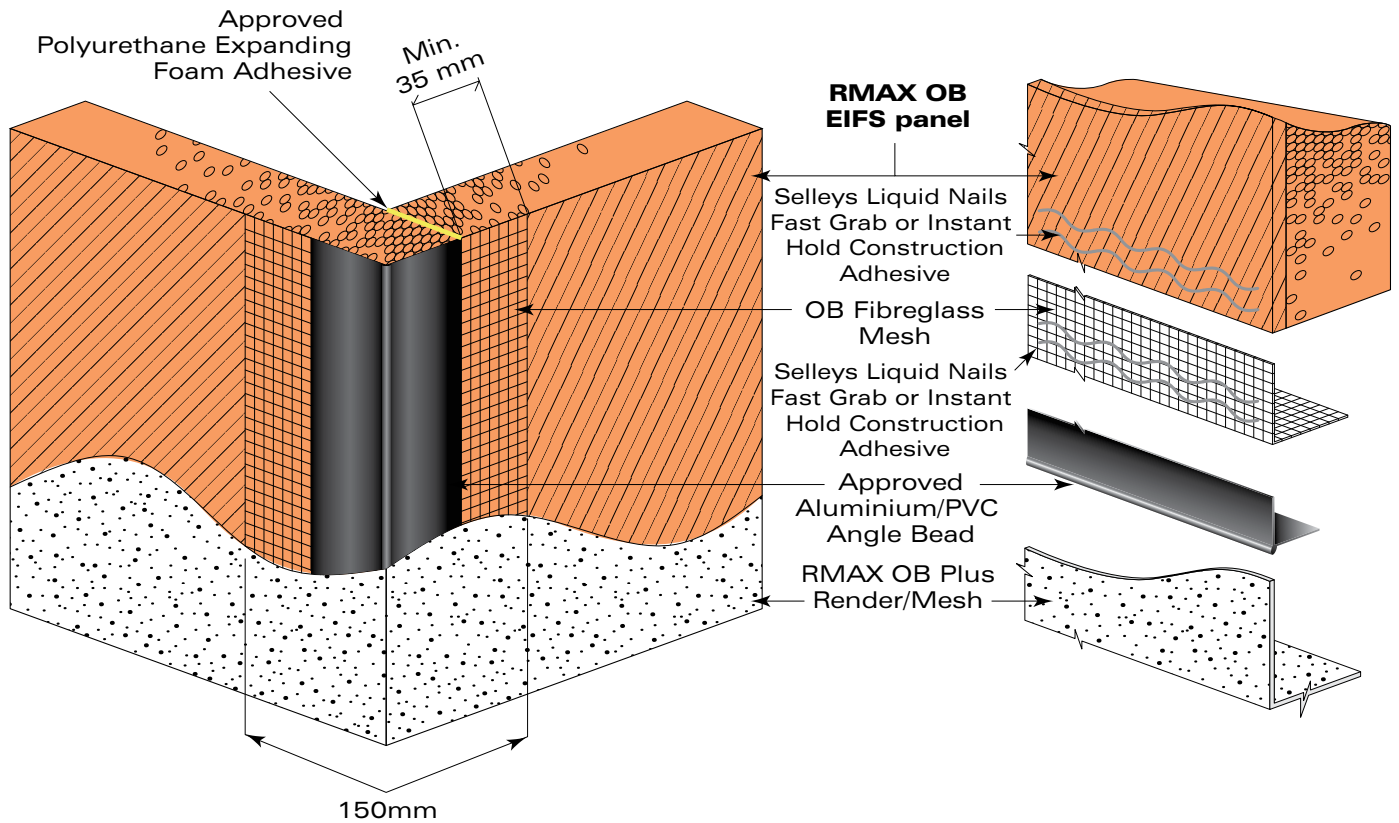
General Health and Safety Procedures Think Safe. Act Safe.

To assist in maintaining a safe and healthy workplace, take note of the following:

- Ensure the workplace is safe. This includes attention to plant and equipment.
- Insist that safe work methods are always practiced.

Certificate Number CM40039

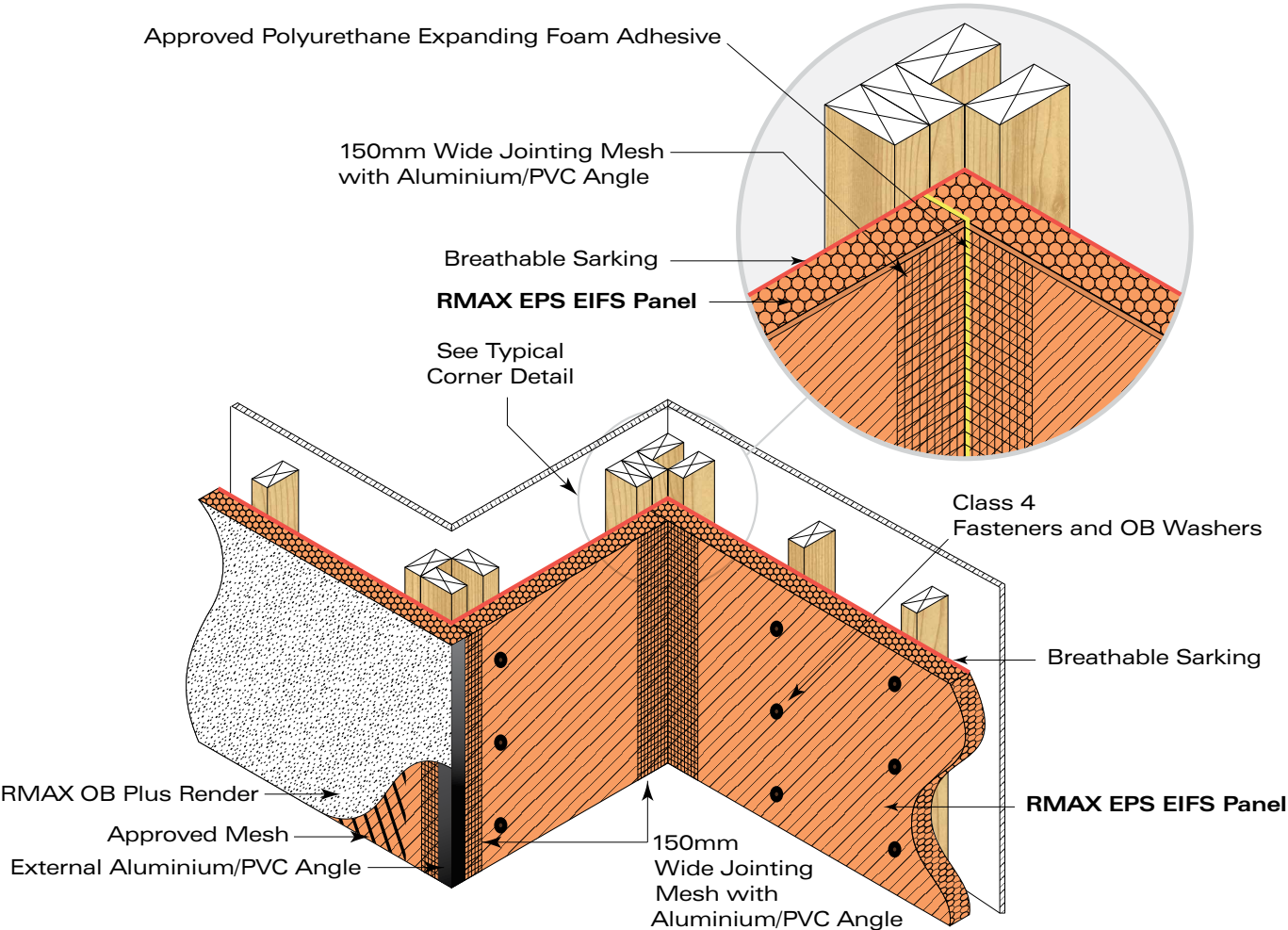
INSTALLATION AND FIXING DETAILS



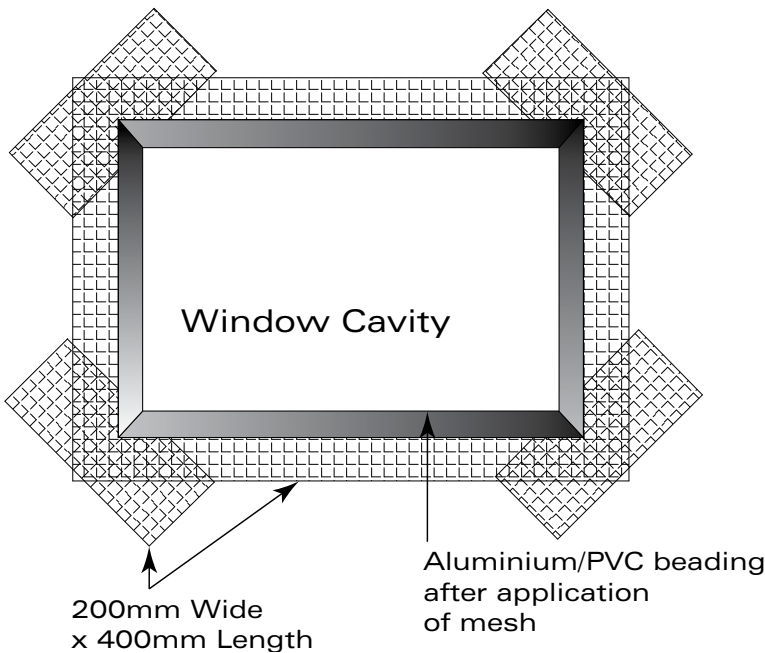
Typical Corner Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



Typical Internal And External Corner Detail

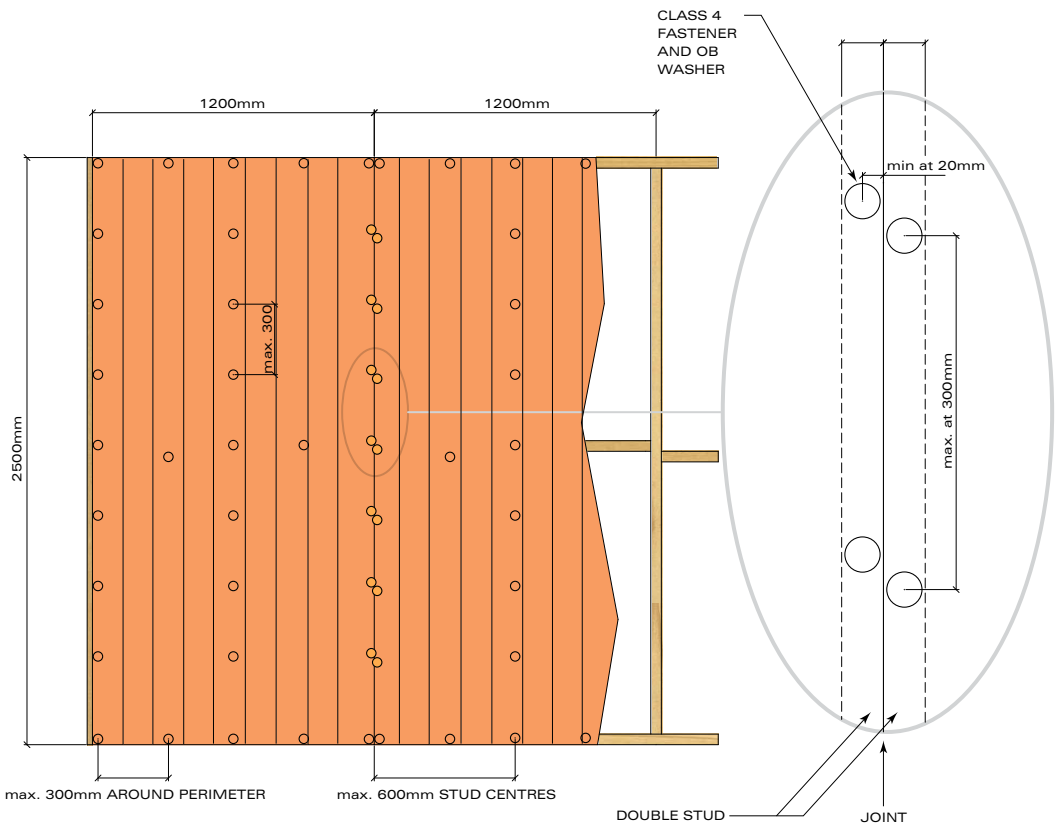


Window Application Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS

In Non Cyclonic Wind Regions (A and B) - Wind Categories N1 to N3
Vertical Orientation Board Installation

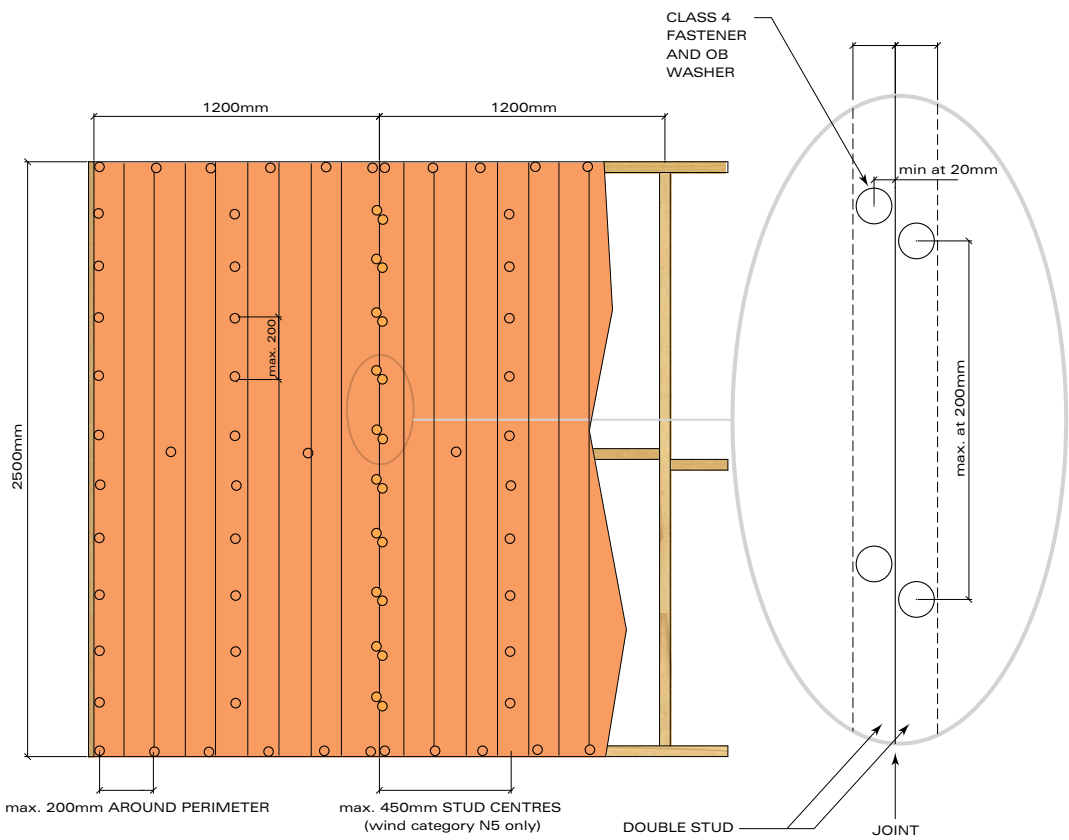


Please refer to page 8 Table 2 Minimum stud and fastener spacing for non cyclonic wind regions and wind categories.

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS

In Non Cyclonic Wind Regions (A and B) - Wind Categories N4 and N5
Vertical Orientation Board Installation

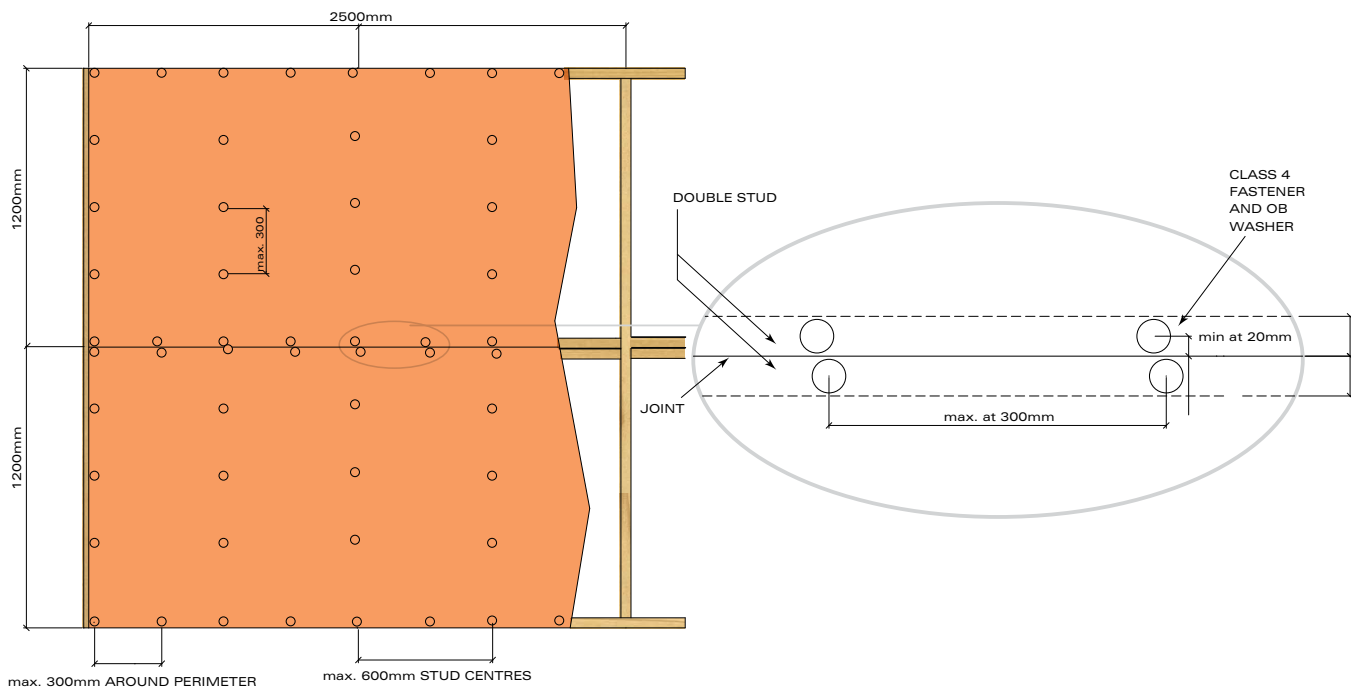


Please refer to page 8 Table 2 Minimum stud and fastener spacing for non cyclonic wind regions and wind categories.

NOTE: DRAWINGS NOT TO SCALE

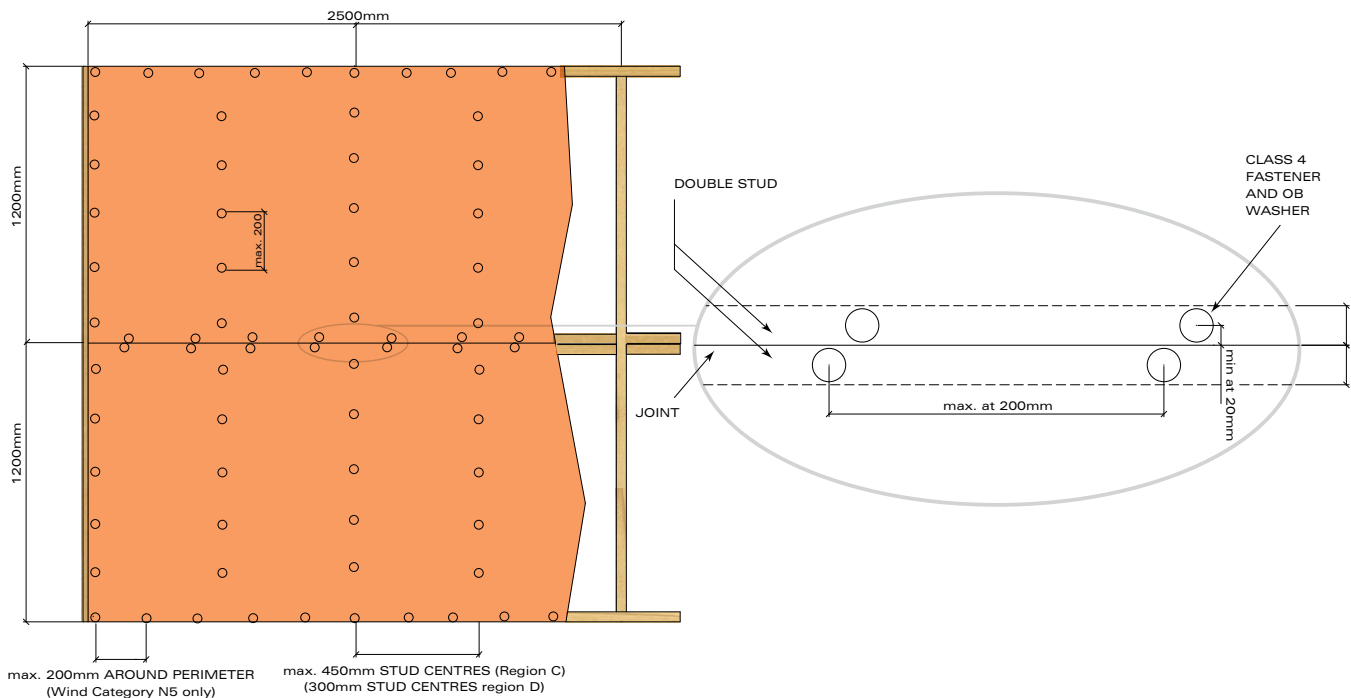
INSTALLATION AND FIXING DETAILS

In Non Cyclonic Wind Regions (A and B) - Wind Categories N1 to N3
Horizontal Orientation Board Installation



INSTALLATION AND FIXING DETAILS

In Non Cyclonic Wind Regions (A and B) - Wind Categories N4 and N5
Horizontal Orientation Board Installation

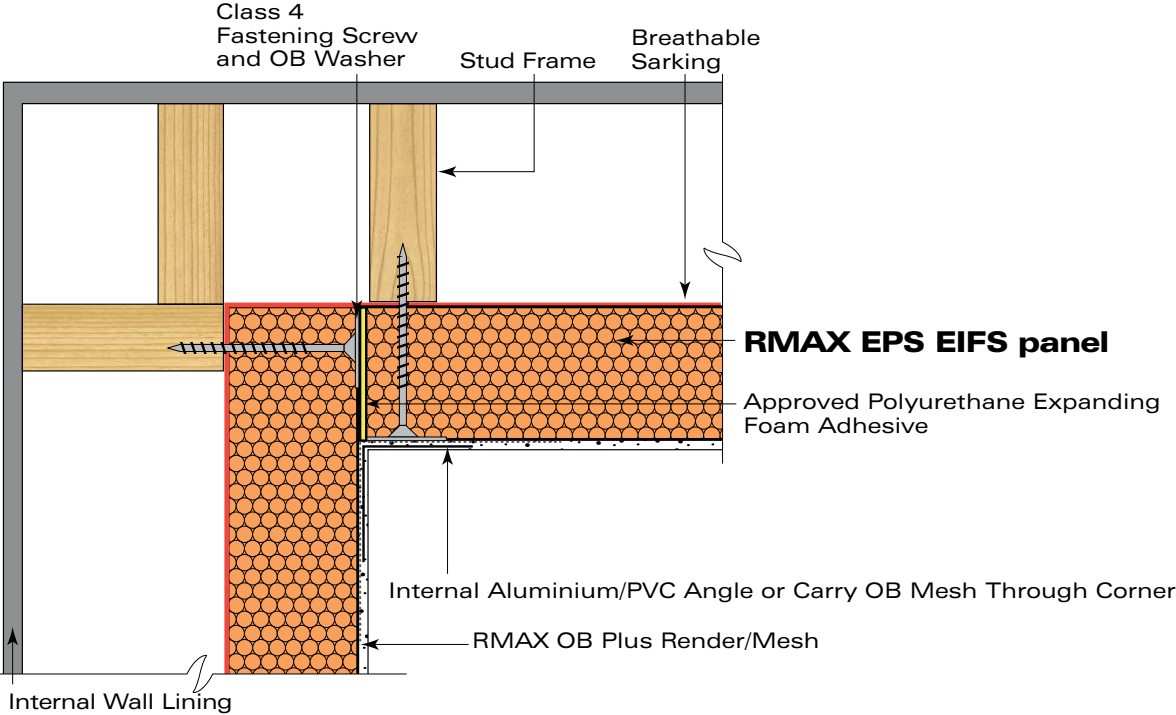


Please refer to page 8 Table 2 Minimum stud and fastener spacing for non cyclonic wind regions and wind categories.

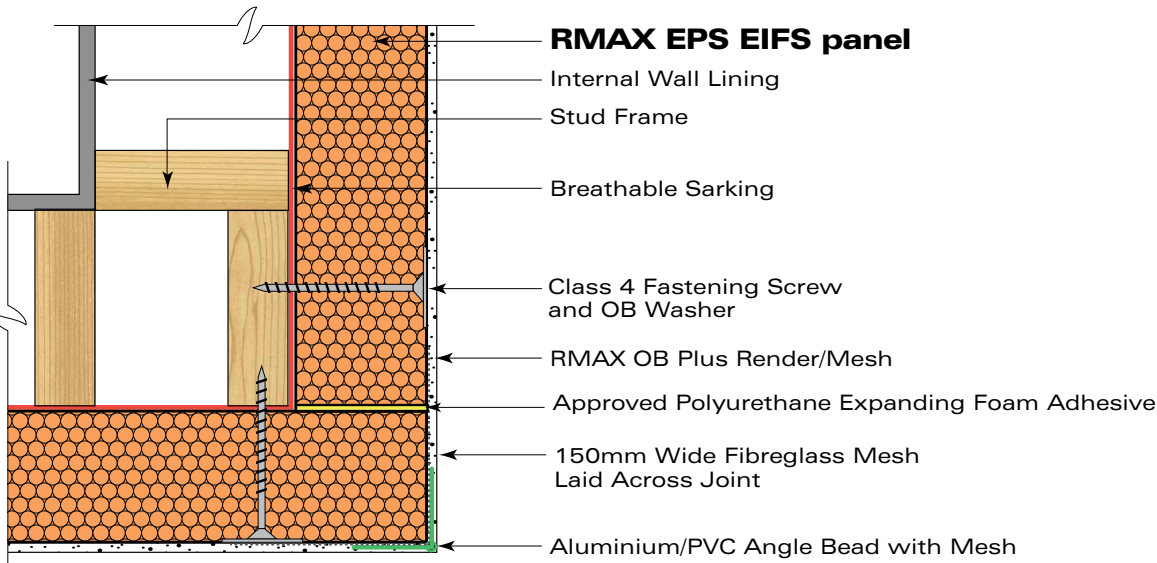
NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS

Corner Details



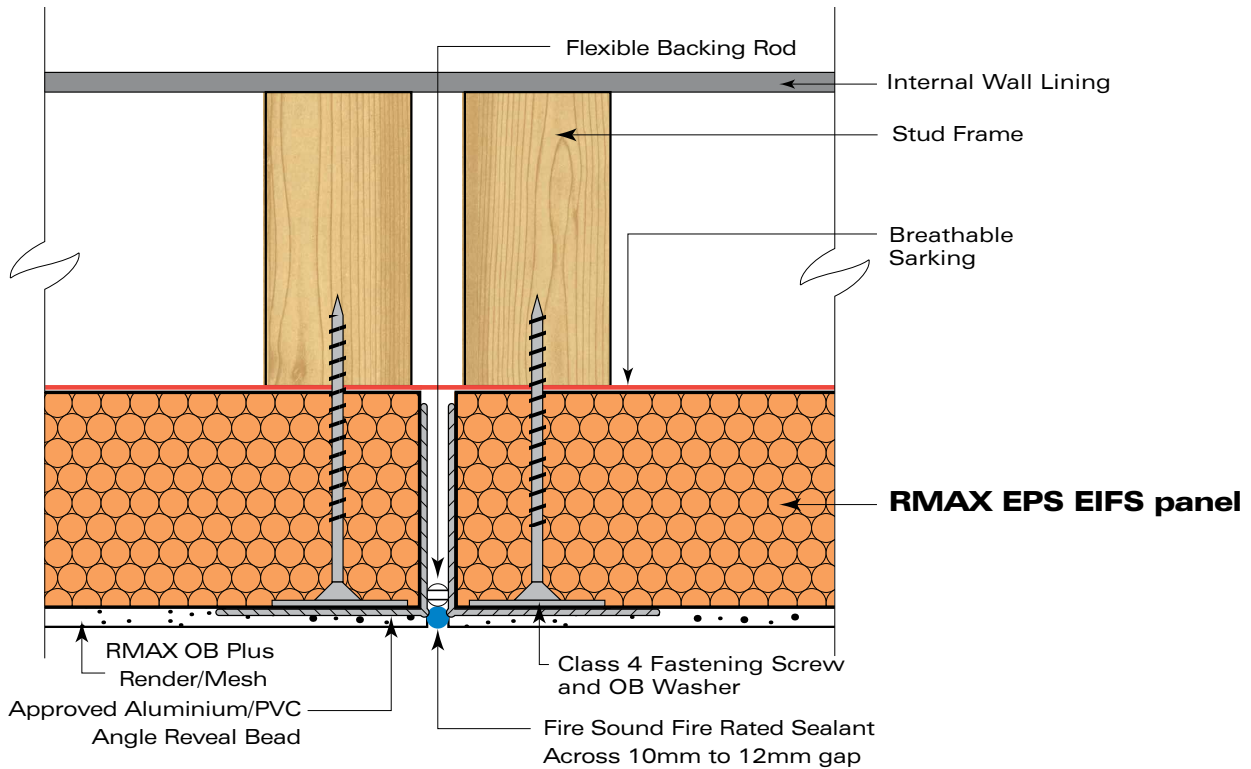
Internal Corner Detail



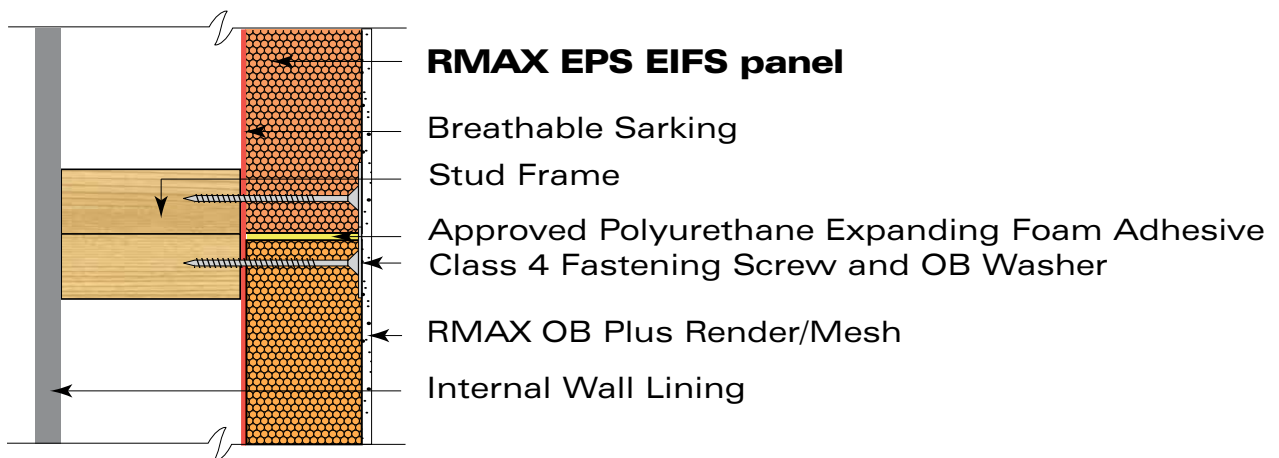
External Corner Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



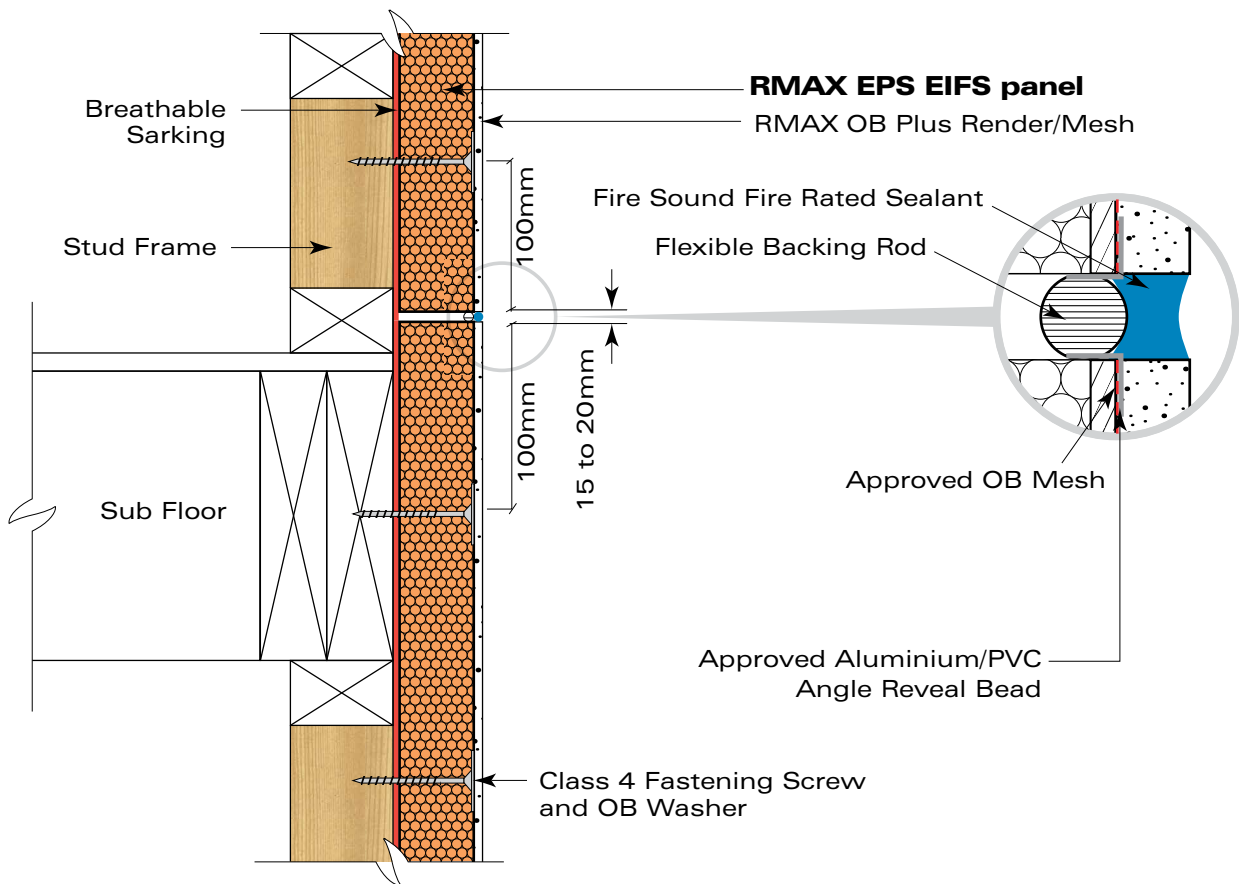
Expansion (Control) Joint Detail



Panel Joint Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



Horizontal Control Joint Detail

Expansion (Control) Joints

Prior to installation of the RMAX Direct Fix EIFS Cladding Panels to the stud frame, determine expansion joint placement by consulting with a Design Engineer to calculate the deformation / stress due to soil / structure movement, deflection due to load bearing on roofing structures and to specify location of expansion/control joints.

Placement Guide: The following is a guide only and does not negate the user's responsibility to consult a Design Engineer.

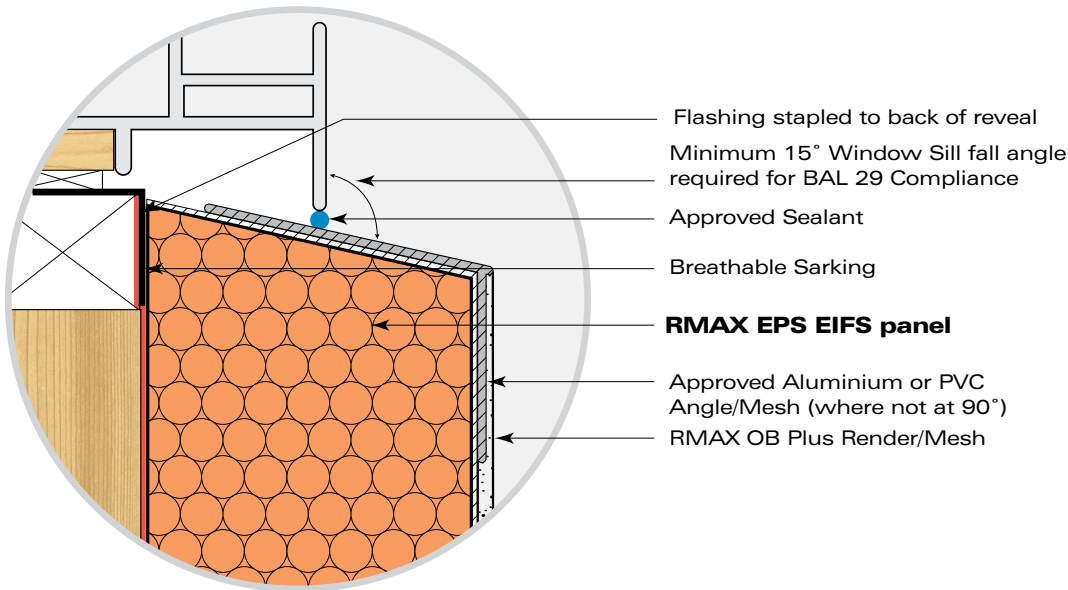
In line with good building practice, placement of vertical expansion joints should not exceed 5 metres where the wall length is greater than 8 metres. Joints should be placed to align with large door and window openings and internal corners. Double studs are necessary at all vertical expansion joints.

Vertical expansion (control) joints must be continuous across all panels. i.e. They must be continuous from the top of the wall to the bottom of the OB EIFS panel and must cut across the starter channel.

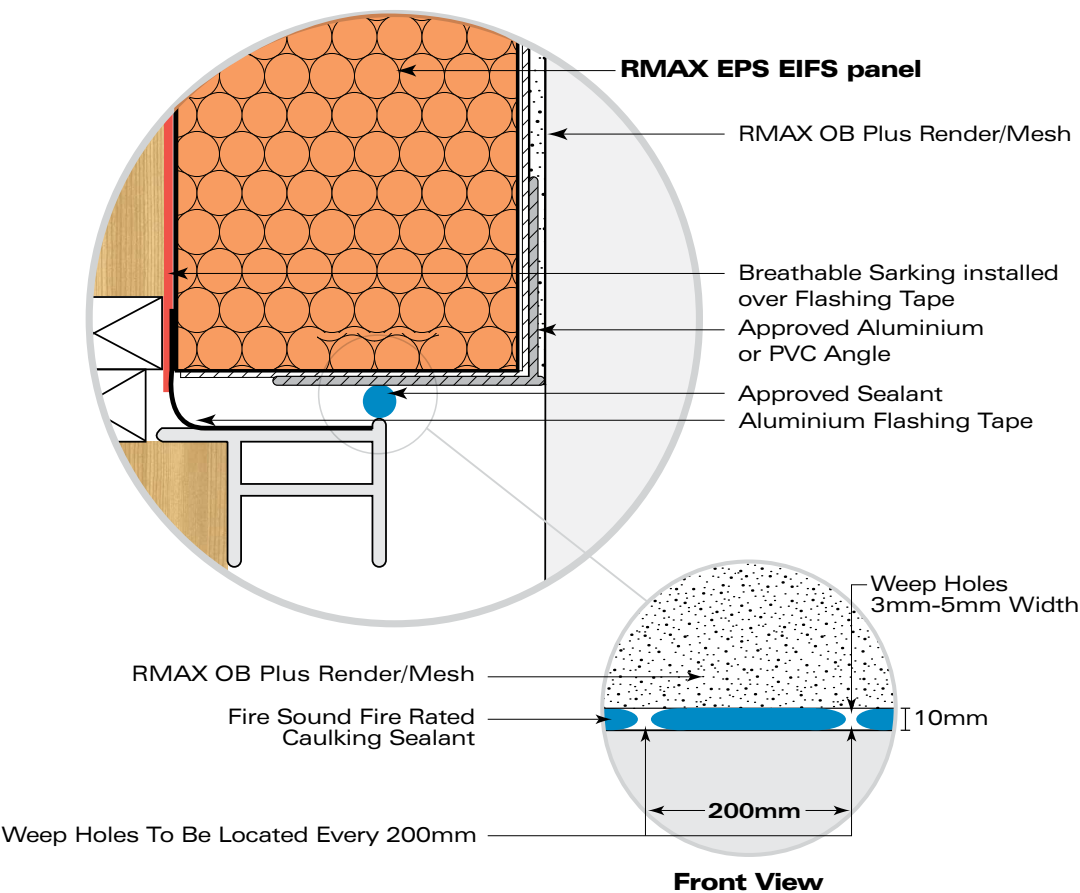
Spacing of horizontal expansion joints should not exceed 3 metres.

Expansion joints must occur where any of the RMAX Direct Fix EIFS Cladding Product Range cladding panels meet other substrates / cladding materials.

INSTALLATION AND FIXING DETAILS



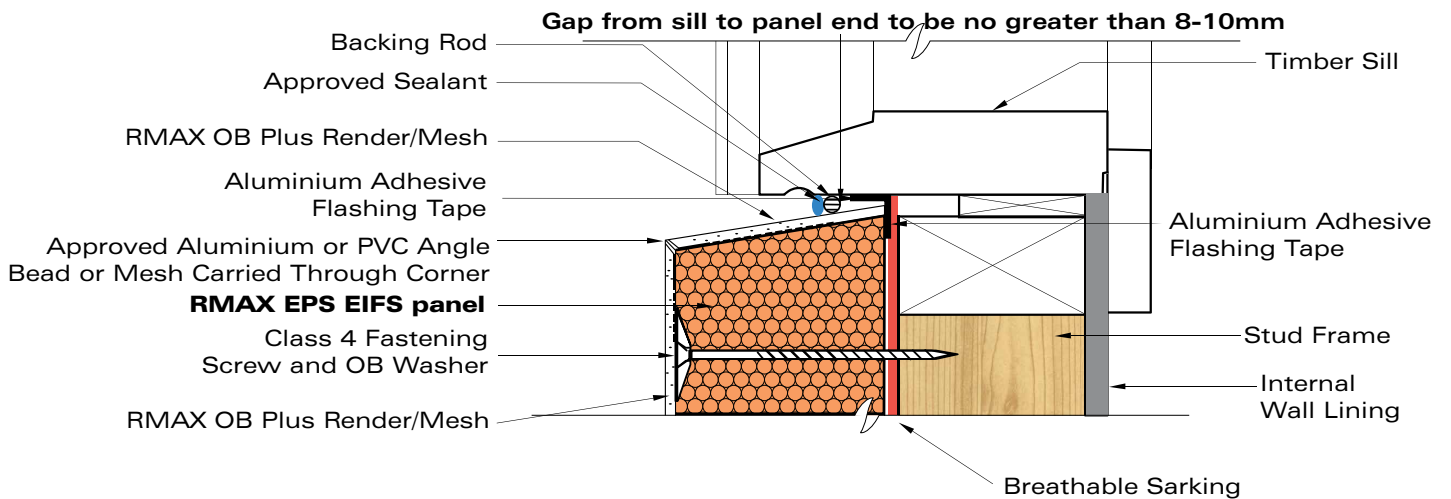
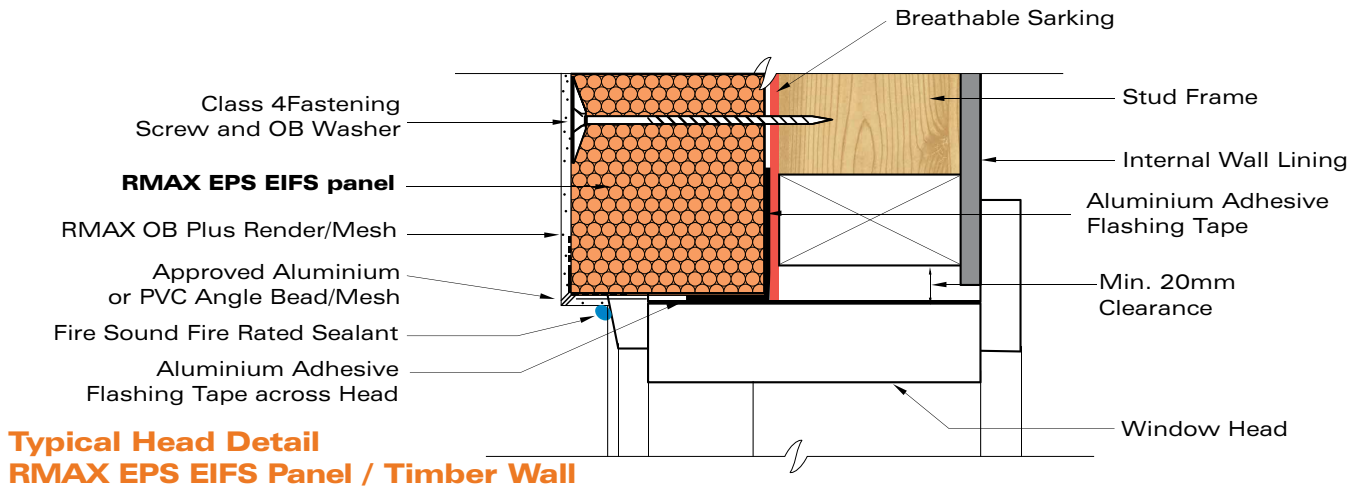
Window Sill Detail



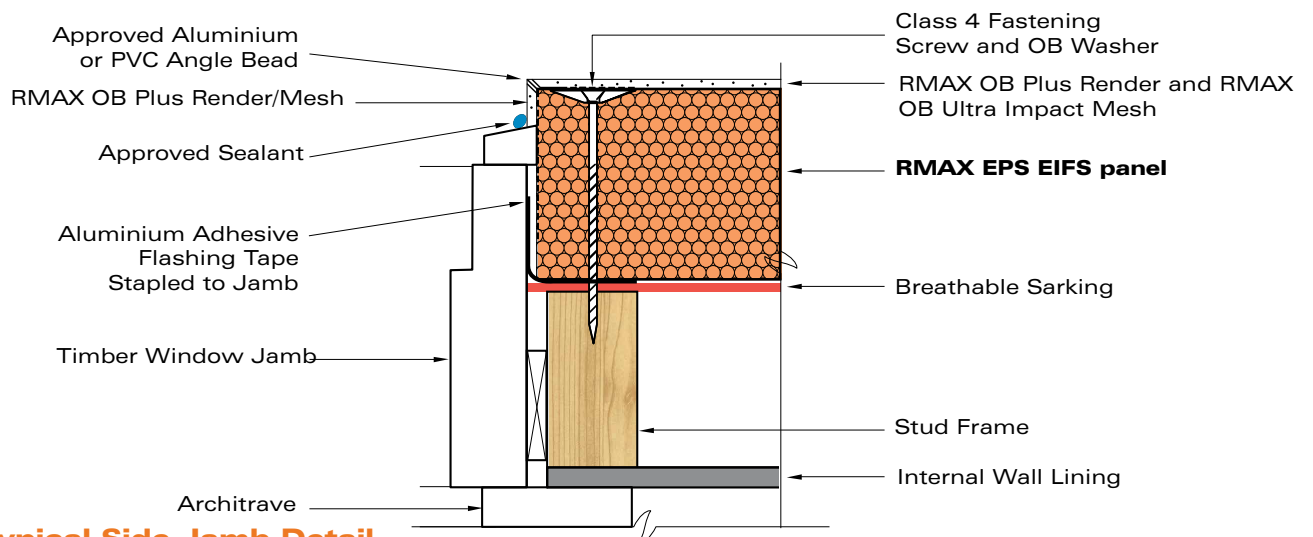
Head/Jamb Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



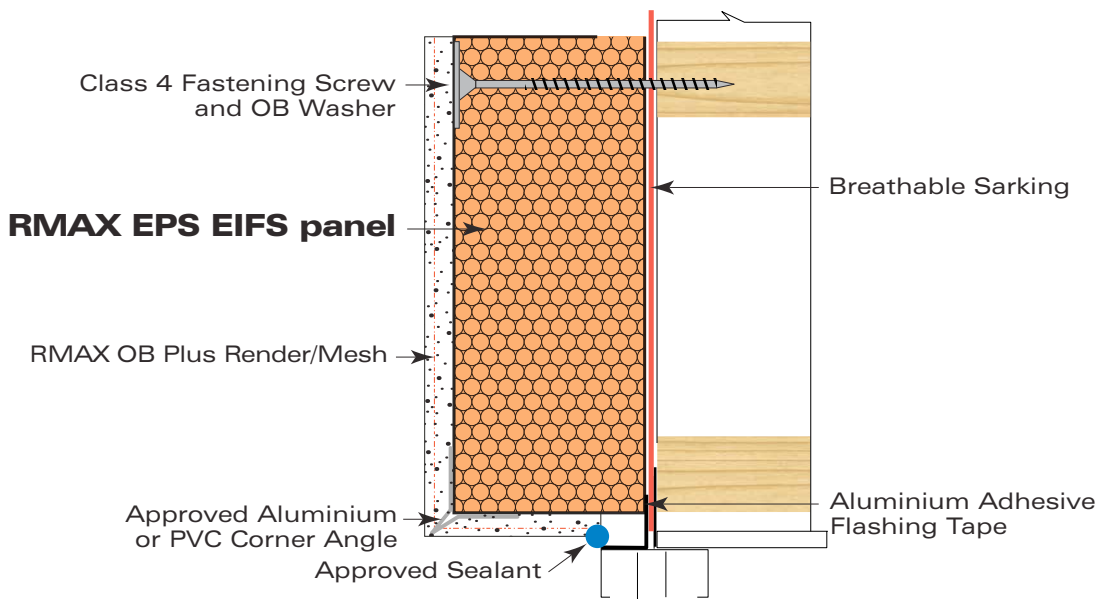
Typical Sill Detail
RMAX EPS EIFS Panel / Timber Wall



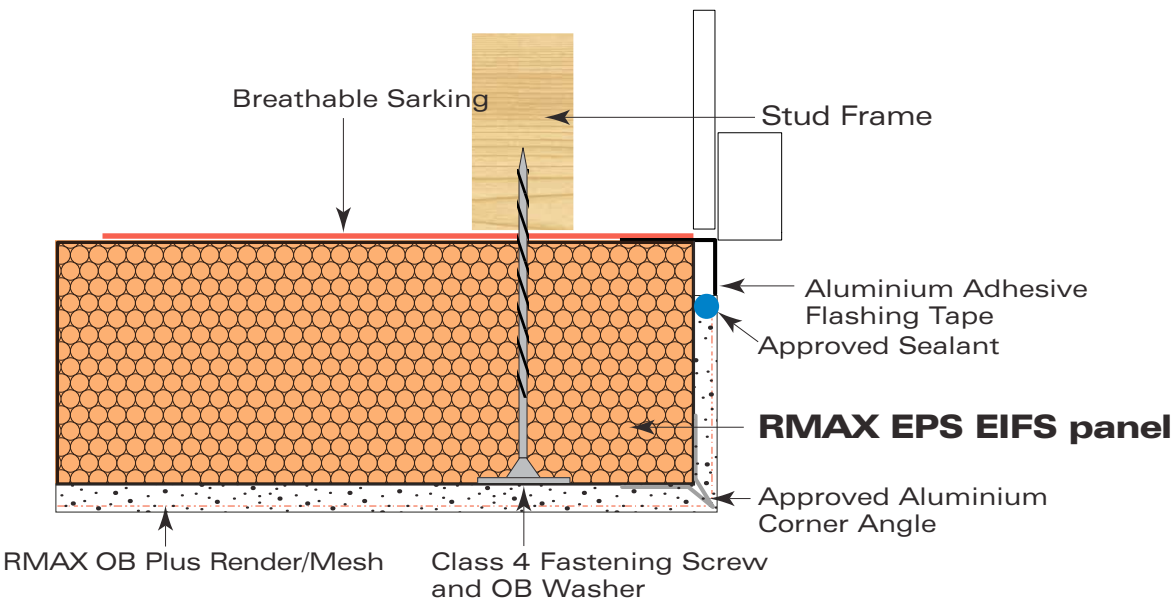
Typical Side Jamb Detail
RMAX EPS EIFS Panel / Timber Wall

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS

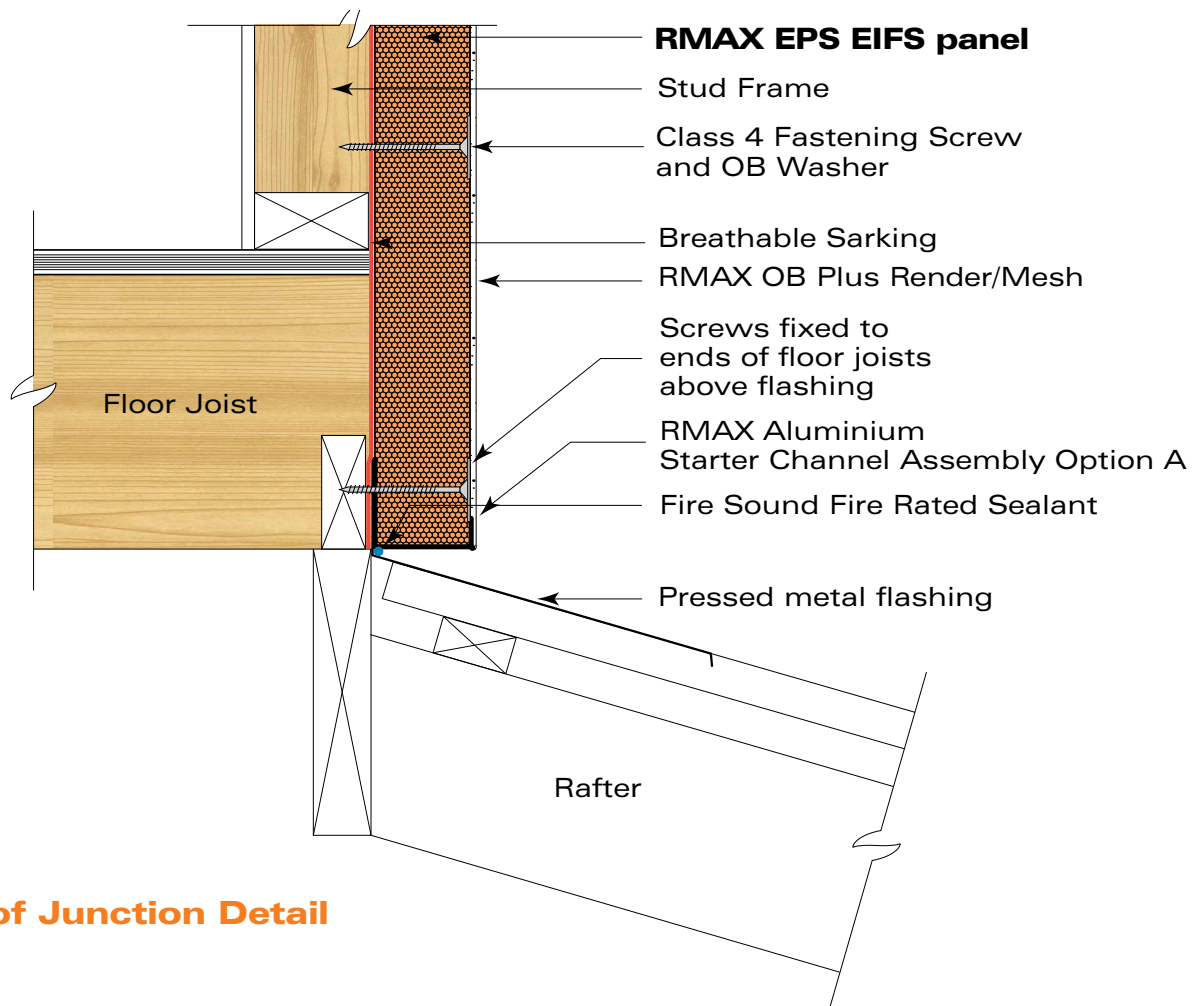


Door Head Detail



Door Jamb Detail

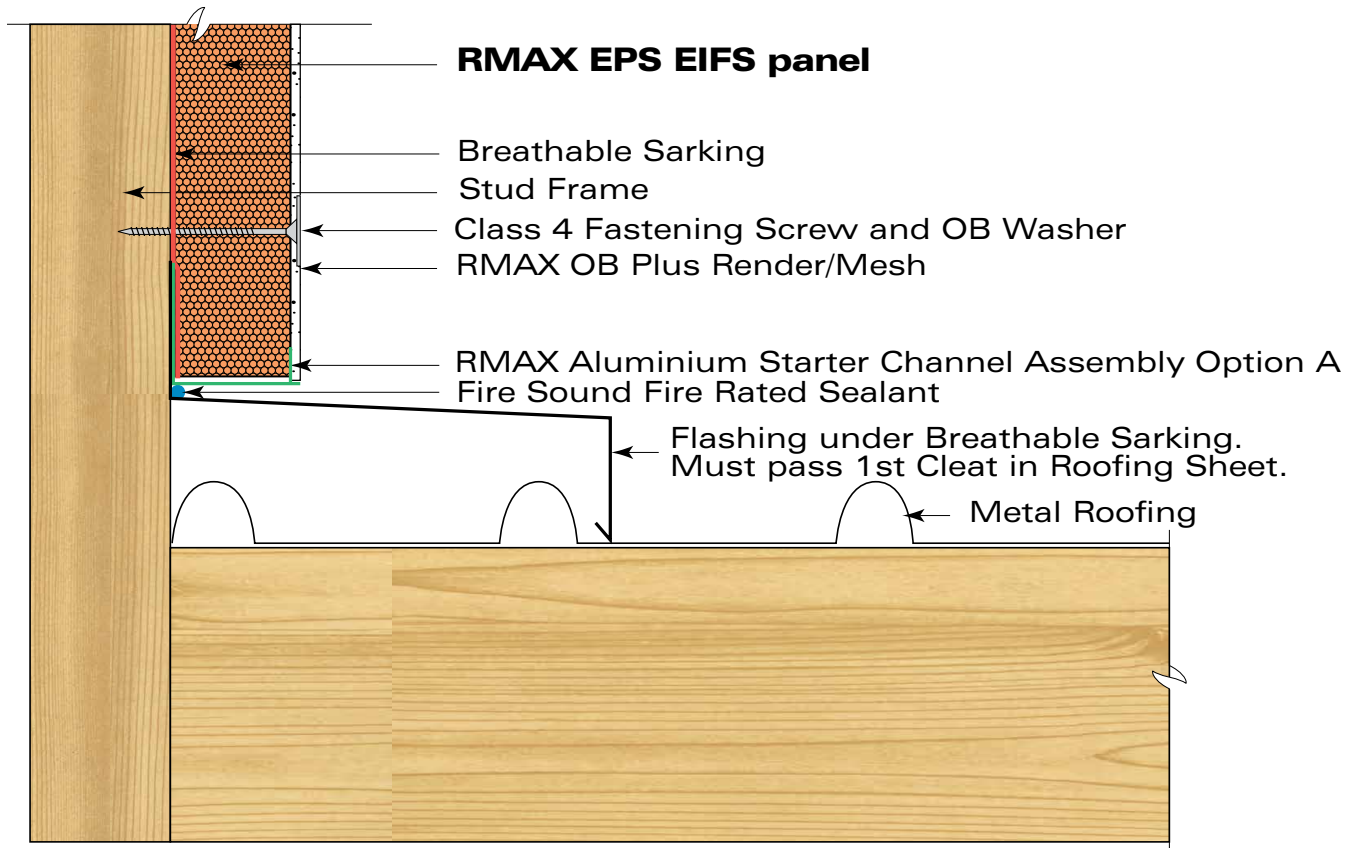
INSTALLATION AND FIXING DETAILS



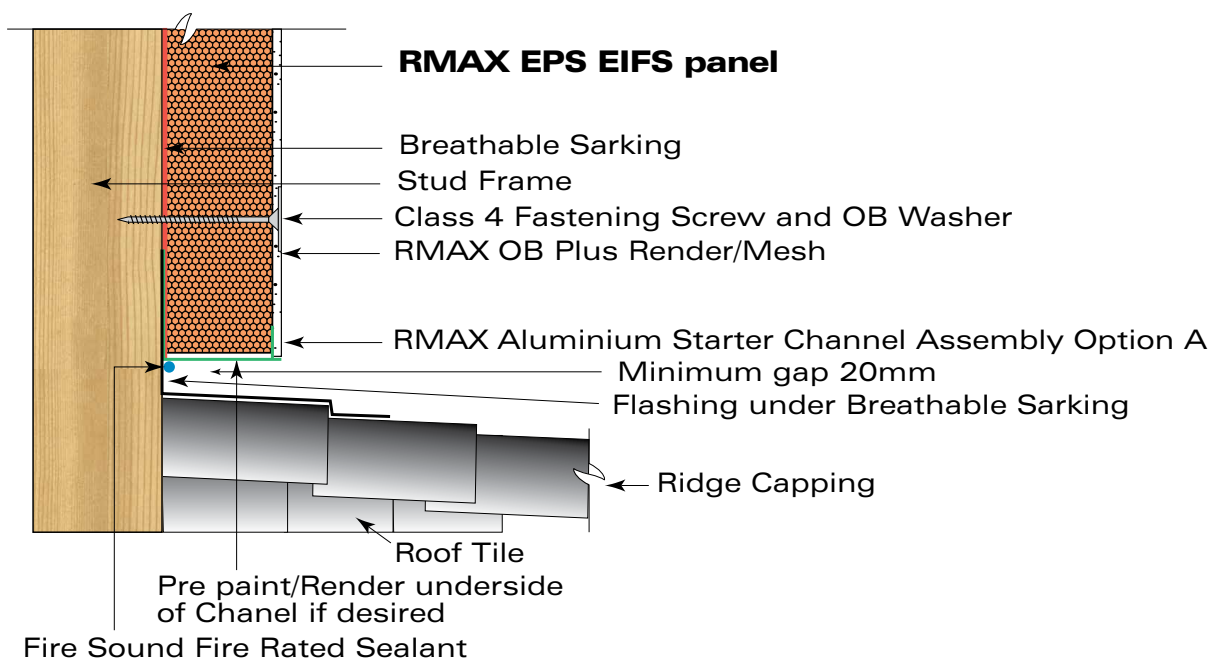
Roof Junction Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



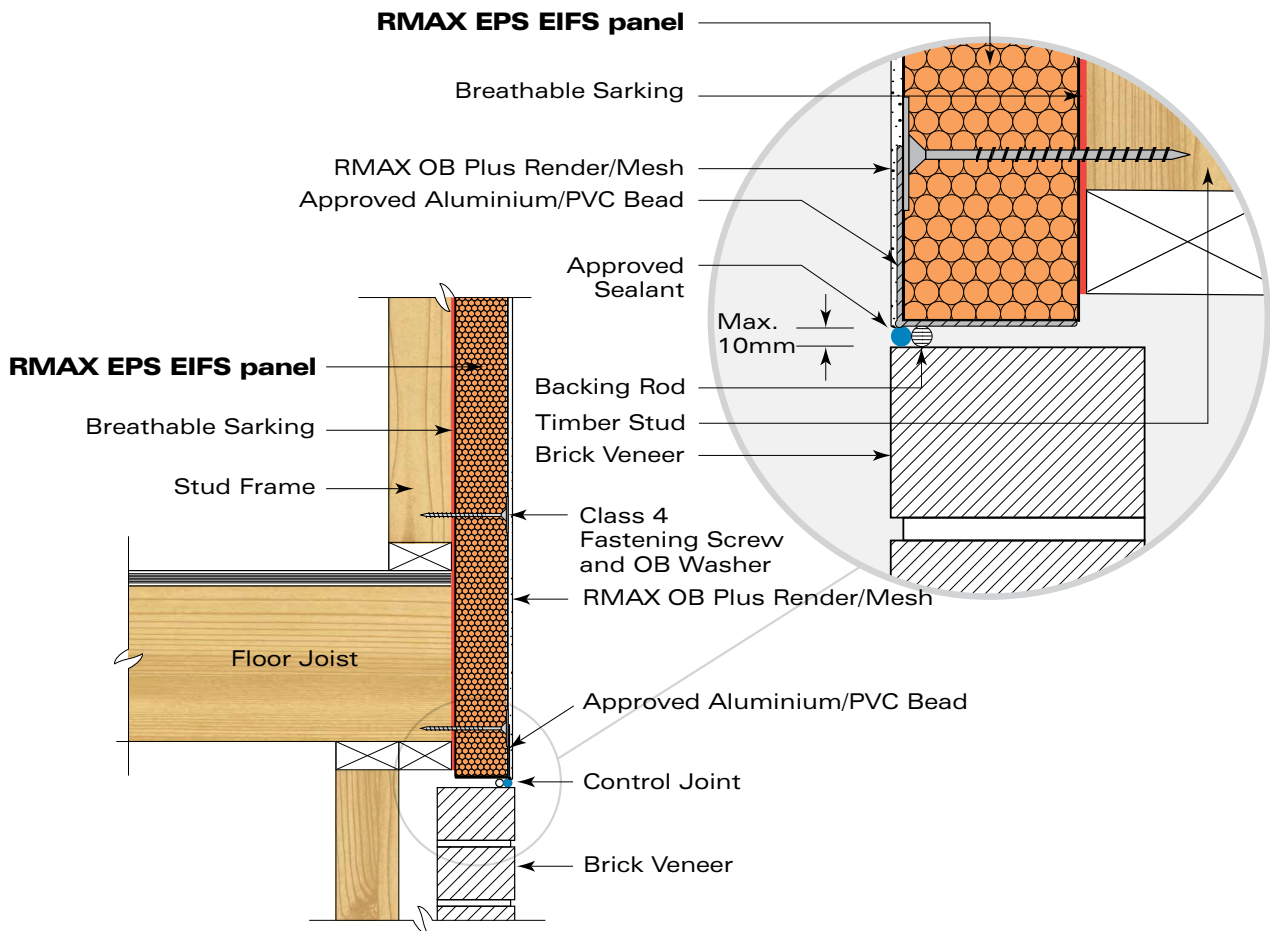
Over Flat Roof Detail



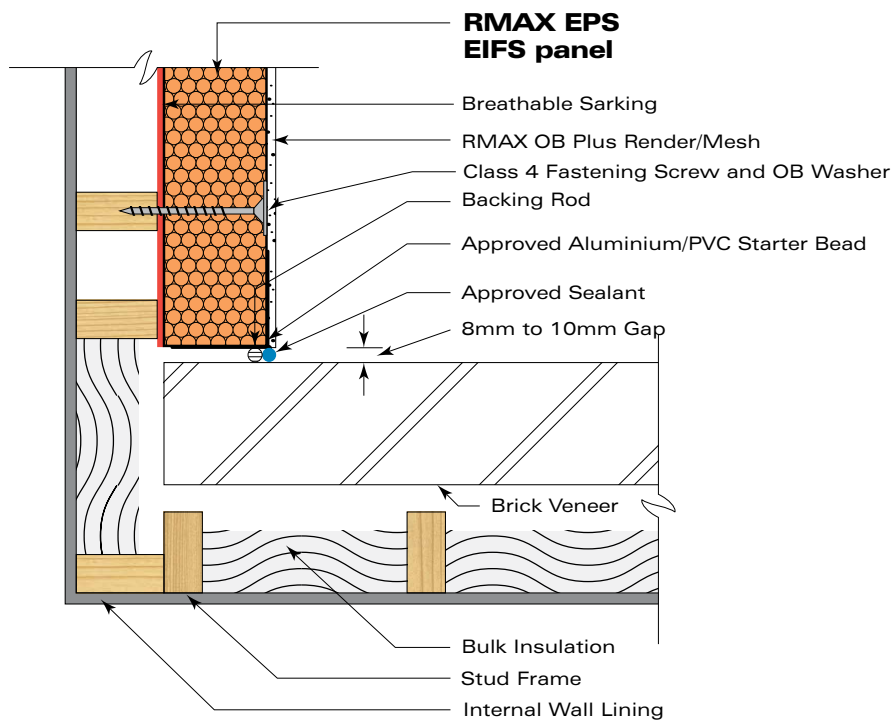
Over Roof Detail - Ridge Capping

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



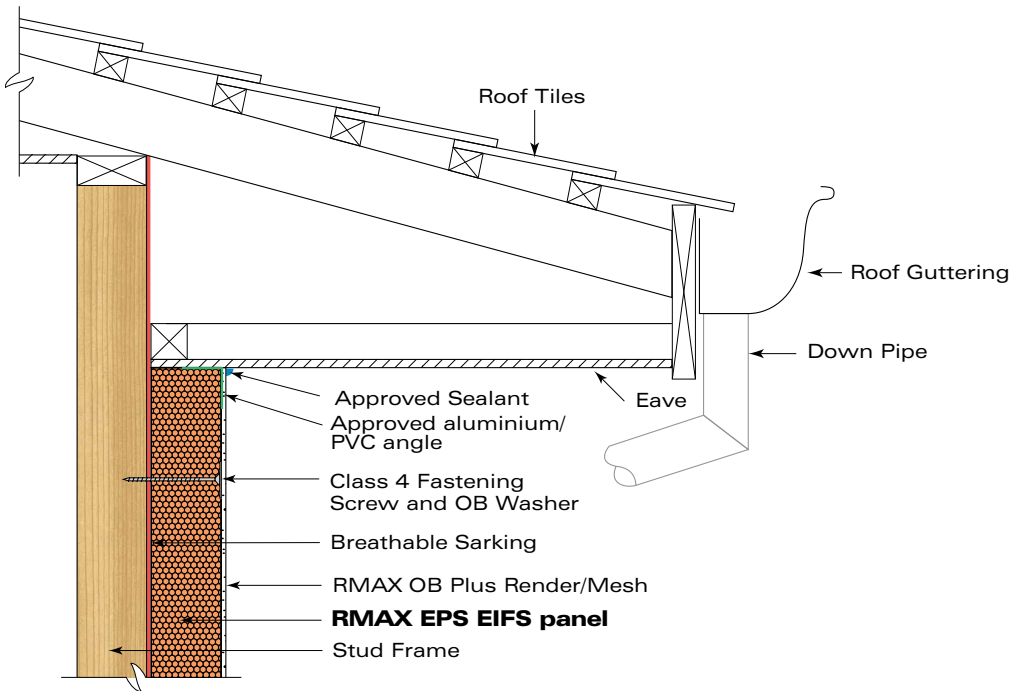
Brick Veneer Junction Detail



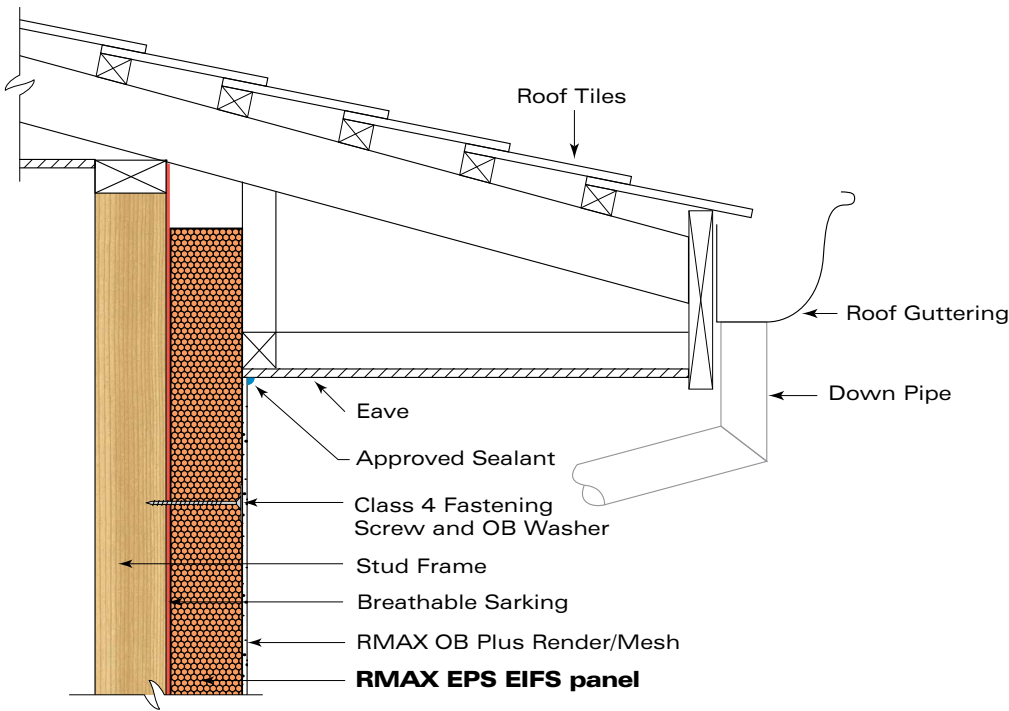
Cladding to Brick Detail - Internal Corner

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



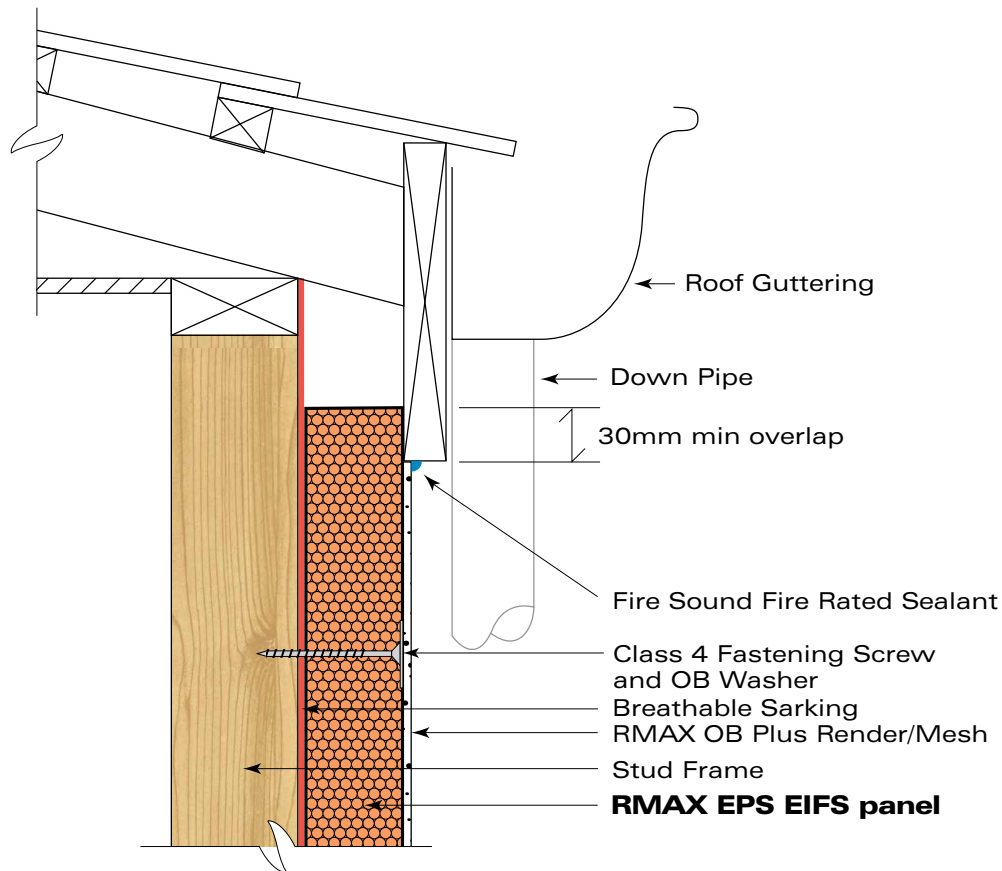
Eave Detail - Type 1



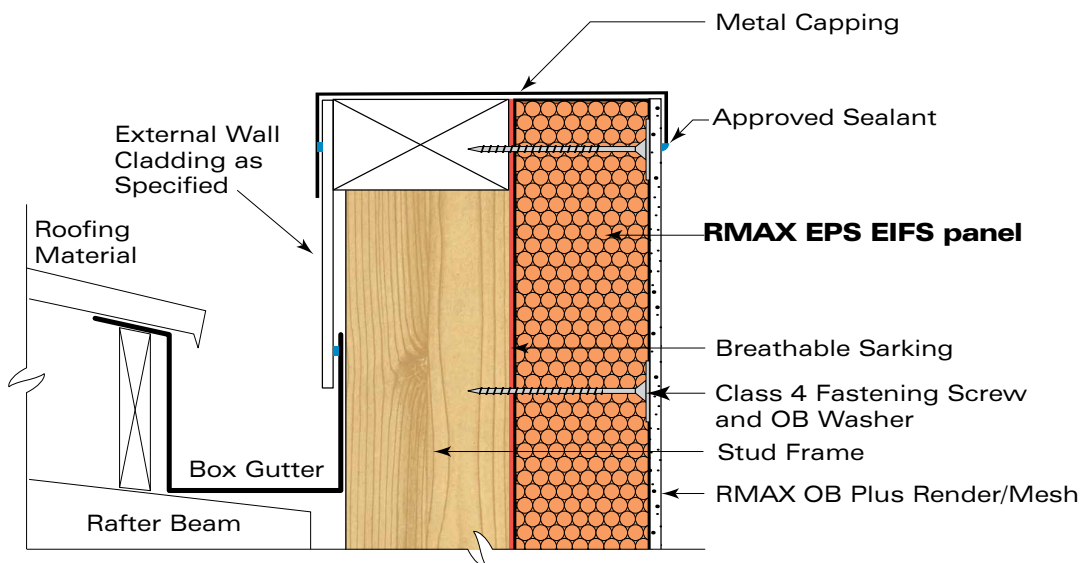
Eave Detail - Type 2

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



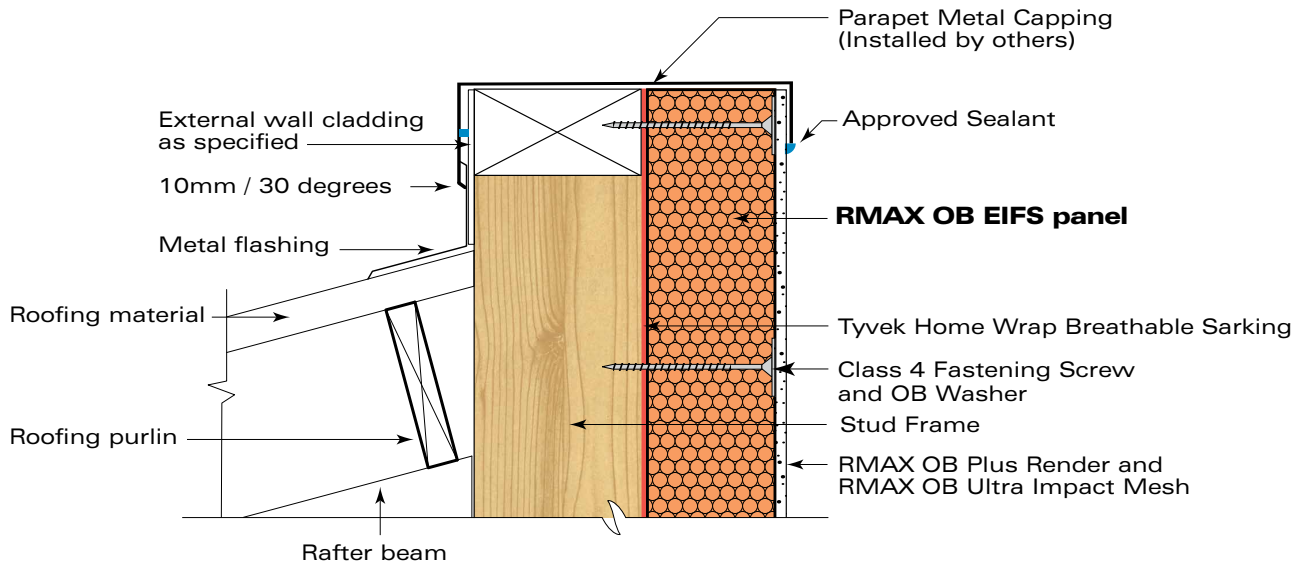
Flush Eave Detail



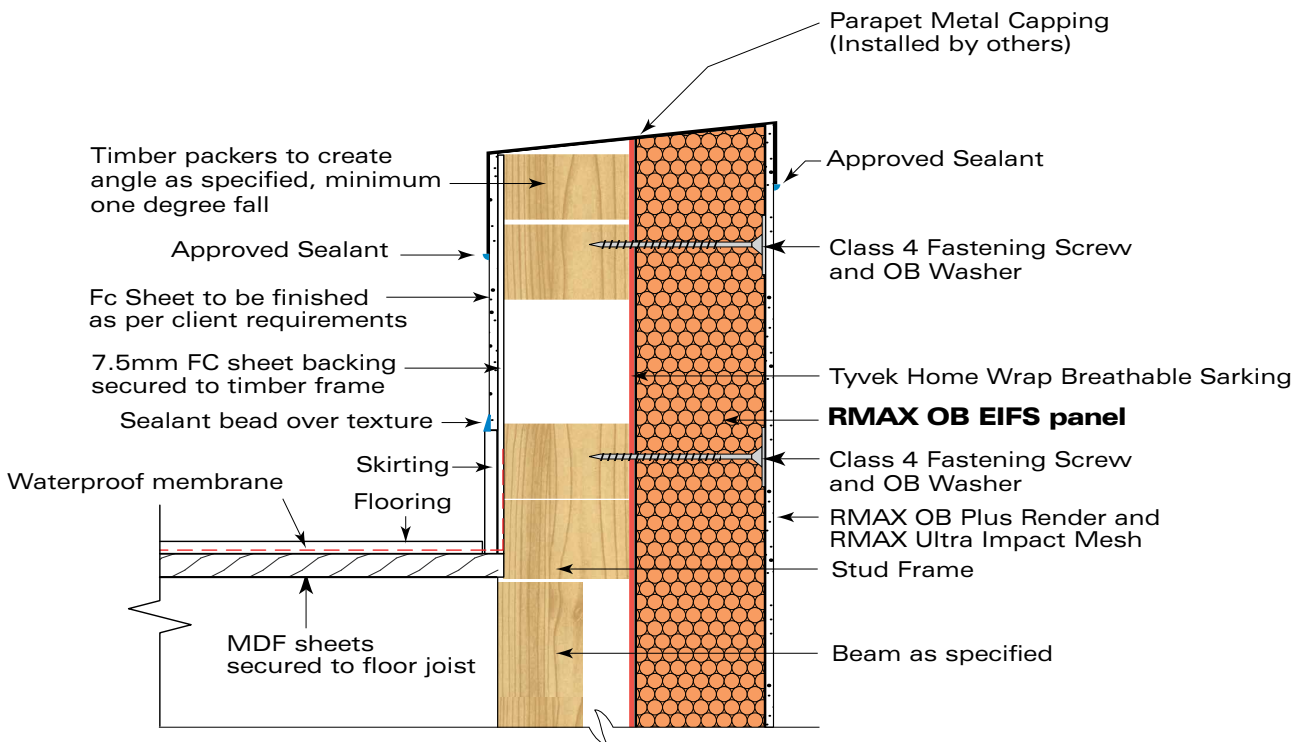
Parapet Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



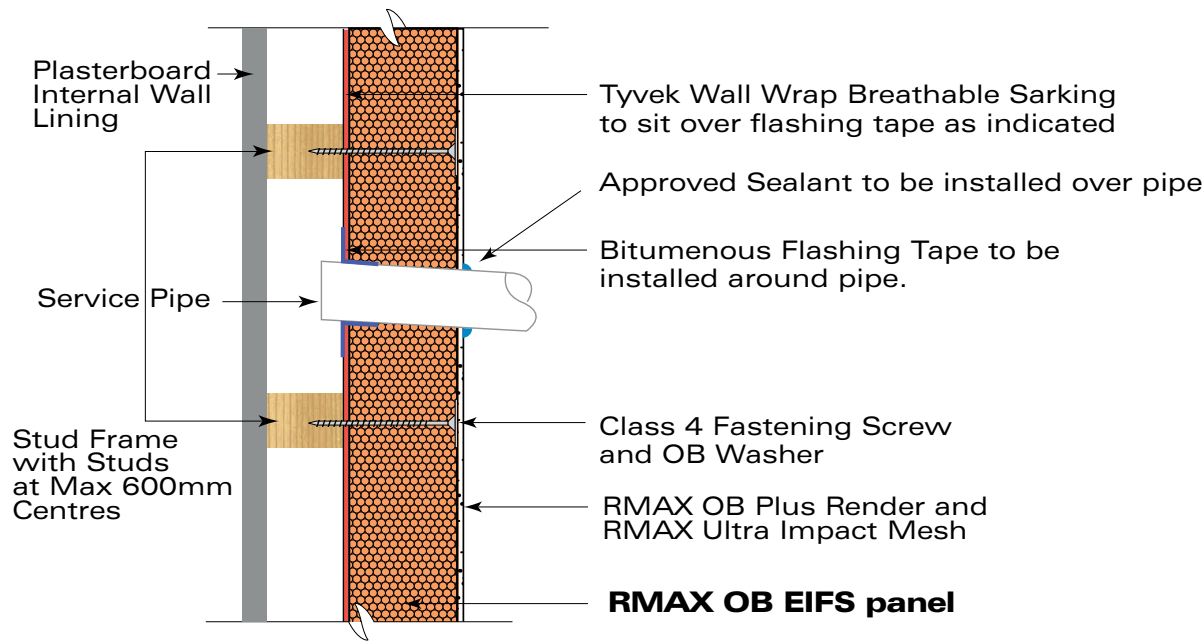
Metal Capping Parapet Detail



Balustrade Wall Detail

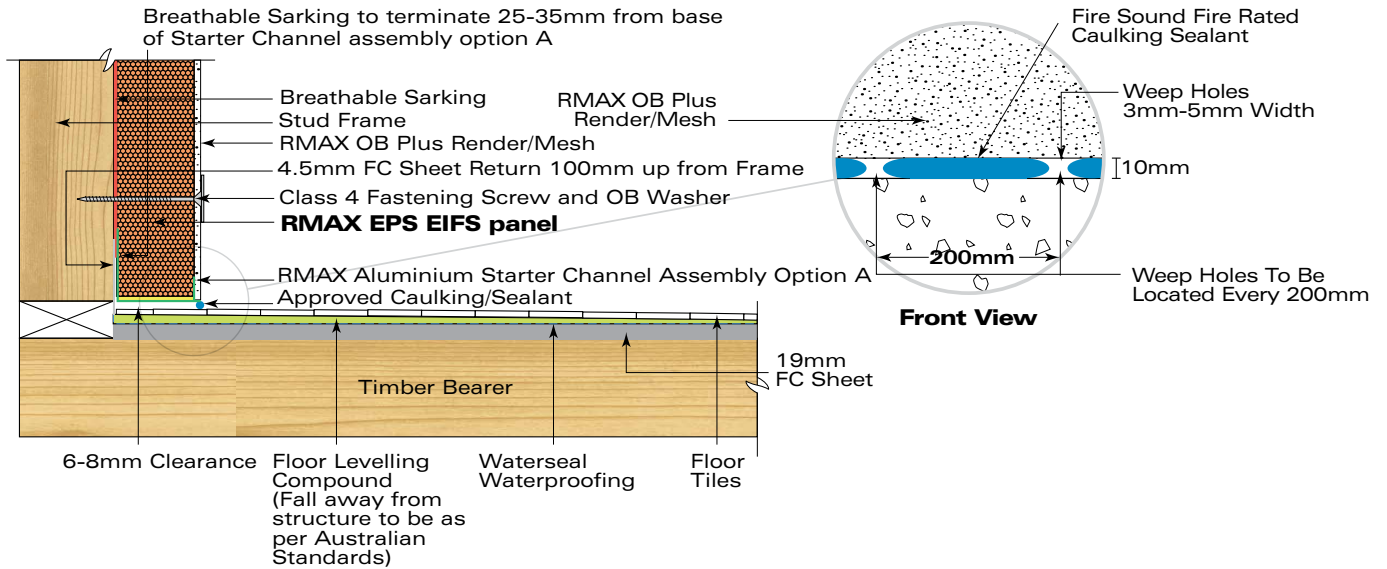
NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



Wall Penetration Detail

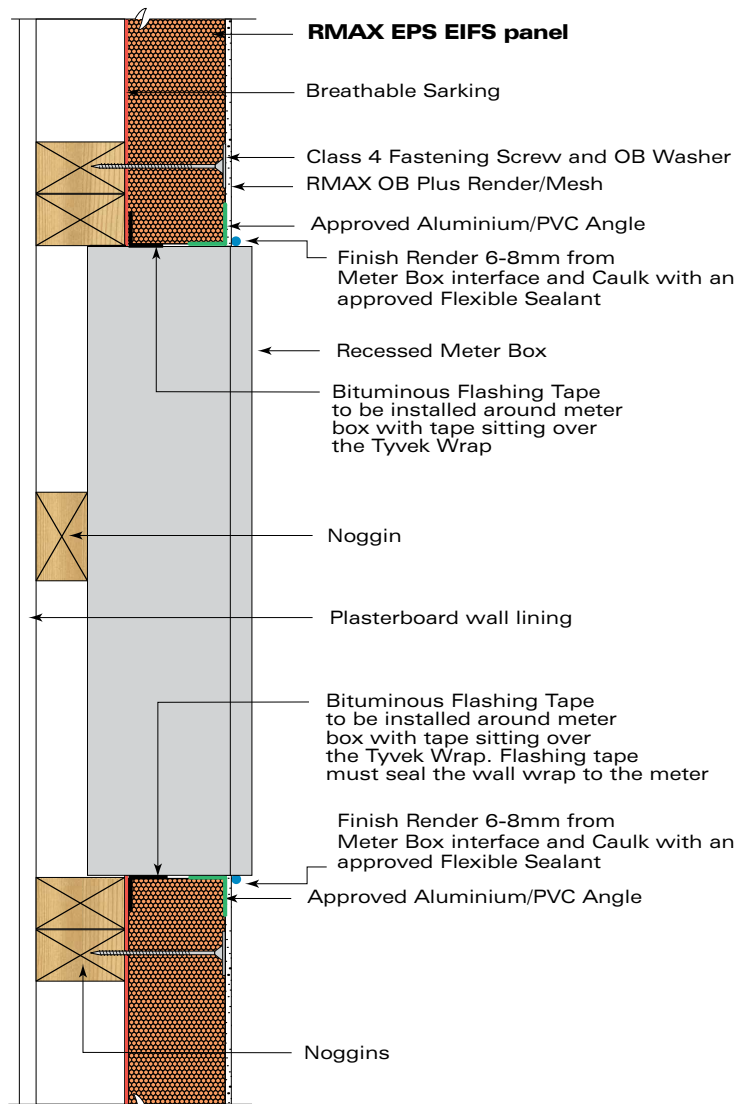
INSTALLATION AND FIXING DETAILS



Footnote

- Tiles need to run through to base plate of horizontal wall.
- Panel (Vertical) needs to be lifted 6-8mm above tiles and caulked (inclusive of weep holes) as per Australian Standards.

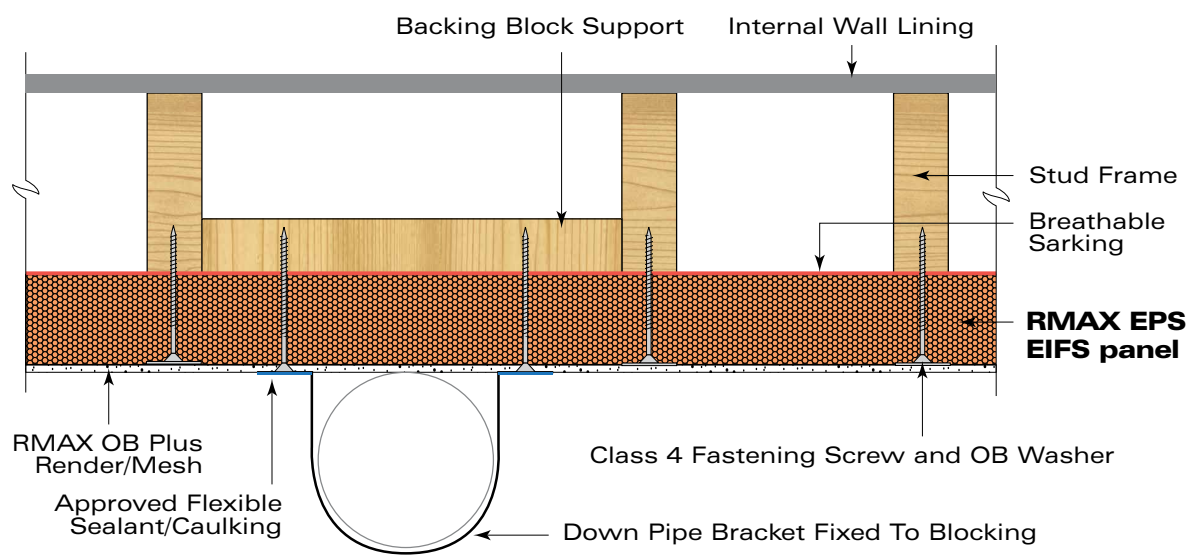
Balcony Floor With Cavity Detail



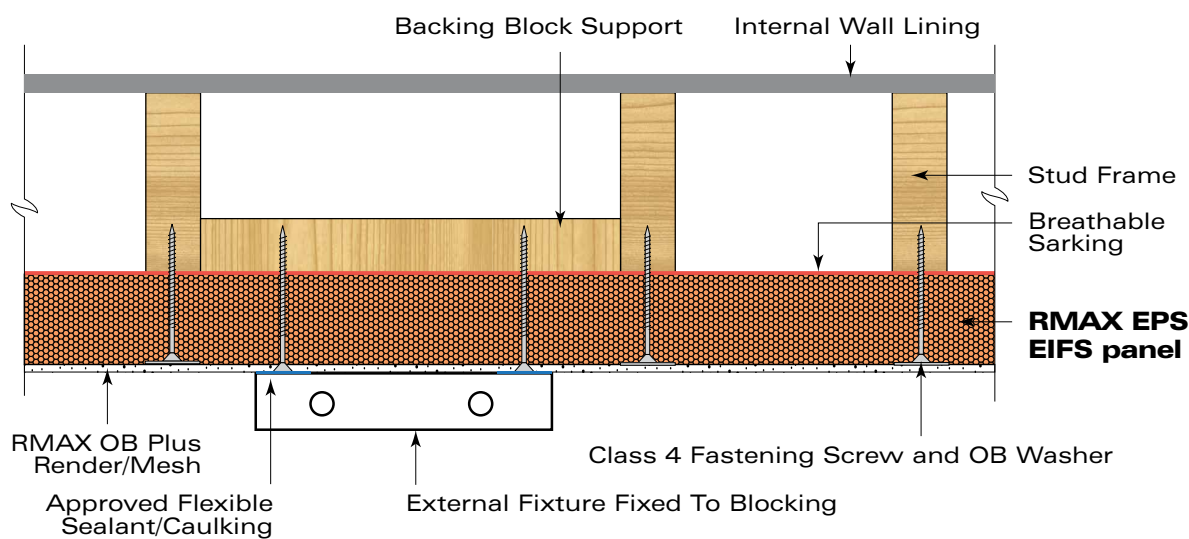
Meter Box Penetration Detail

NOTE: DRAWINGS NOT TO SCALE

INSTALLATION AND FIXING DETAILS



Down Pipe Fixture Detail



External Penetration Fixture Detail

NOTE: DRAWINGS NOT TO SCALE

GENERAL INFORMATION

Warranty

RMAX, a division of Huntsman Chemical Company Australia Pty. Ltd. is the manufacturer of the RMAX Direct Fix EIFS Cladding Product Range.

RMAX Direct Fix EIFS Cladding Product Range Warranty Conditions

1. RMAX warrants that the RMAX Direct Fix EIFS Cladding range of products are free from defects caused by faulty manufacture or faulty materials for a period of 10 years from the date of sale to the purchaser.
2. This warranty is a material only replacement warranty where there is a defect in manufacture. This warranty only applies where the product is applied correctly by a skilled and experienced installer in accordance with all current installation recommendations as per the RMAX Direct Fix EIFS Cladding Product Range Technical Data Manual, including but not limited to, frame and fastener details, installation and fixing details and installation guidelines.
3. In case of Goods "RMAX Direct Fix EIFS Cladding System Product Range" no claim may be made where:
 - The Goods have not been installed in accordance with sellers published installation guide lines.
4. To make a warranty claim the customer must provide the following:
 - (a) The details of the items purchased (application dates, and quantities must be recorded and supplied as a minimum to commence potential product failure investigation).
 - (b) The date and location of purchase.
 - (c) A description of the fault observed with the product, providing photographs and samples if possible.
 - (d) Contact details of the customer.
5. The above information can be provided by:
 - (i) Mail: RMAX Sales, 2-4 Mephan St, Maribyrnong, VIC 3032;
 - (ii) Email: sales@rmx.com.au; or
 - (iii) Fax: 03 9317 7888;
6. Unless otherwise agreed to in writing by RMAX, the Buyer shall bear the expense of claiming the warranty.
7. RMAX provides no warranty, expressed or implied, against damage due to movement of the substrate or structure.
8. Whilst RMAX takes every care to ensure that any impurities in the product are eliminated at the time of manufacture, components of the product may occasionally result in minor visual blemishes. RMAX shall not be liable for any such blemishes.

9. Where the Buyer is a consumer under the Competition and Consumer Act 2010, the benefits given under this warranty are in addition to the statutory rights and remedies available to the 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.
10. To the full extent permitted by law the liability of RMAX for any defect or a breach of the Purchaser's statutory rights is limited solely to any one or more of the following as determined by RMAX in its sole discretion, namely:
 - (i) The supply of replacement products or similar products.
 - (ii) the repair of the products; or
 - (iii) the costs of replacement or repair of the products.
11. Except as expressly provided in this warranty, to the full extent permitted by law, RMAX will in no circumstances be liable for any loss or damage, whether direct or indirect (including consequential loss, economic or financial loss) to persons or property howsoever arising and whether from any defect in or unsuitability of a product or from negligence on the part of RMAX or any of its servants, contractors or agents. In particular, RMAX will not be responsible for any loss or damage arising from normal wear and tear, weather conditions, any act of God, poor installation or rendering or caused by wildlife or organisms. RMAX is not, and will not be, responsible or liable to any person in any manner whatsoever for incorrect fixing, joining, installing, finishing and / or rendering by any person.

Disclaimer

The information contained in this manual is presented as a guide to users of the RMAX Batten Cavity EIFS Cladding range of products, and while to the best of RMAX's knowledge it is correct and reliable, RMAX shall not be liable for defects associated with incorrect use of RMAX Batten Cavity EIFS Cladding range of products, misuse, wilful damage, neglect, accidental damage, or any modifications or alterations to any of the range of RMAX Batten Cavity EIFS Cladding Products.

REFERENCED DOCUMENTS AND INFORMATION

Referenced Documents / Images

1. Applied Acoustics Laboratory
RMIT University School of Electrical and Computer Engineering
Melbourne, Victoria 3000, Australia
NATA Accreditation Number 1421
Report on the Determination of Airborne Sound Transmission loss in One Third Octave Bands and Weighted sound reduction Index (Rw) of RMAX 75mm Orange Board M Grade Wall with Orange Board render on the external face, sarking and 10mm plasterboard on the internal wall face.
Test Report to AS 1191 - 2002 Full Wall System.
Test report Number 1211/11-060/JW
Report issue Date 17/3/2011.
2. AWTa Product Testing.
AS/NZS 2498.5-1993 Method 5.
Method of testing Rigid Cellular Plastics.
Determination of water vapour transmission rate of RMAX M grade OB panel.
Australian Wool Testing Authority Ltd.
1st Floor, 191 Racecourse Road,
Flemington Victoria 3031.
Test report Number: 19-002198
Report issue Date: 27/05/2019.
3. AWTa Product Testing.
AS/NZS 1530.3 -1999 testing
Methods for fire tests of Building materials, components and structures
Part 3: Simultaneous determination of Ignitability, Flame propagation, Heat release and Smoke Release of RMAX Isolite Rigid Insulation panel "M Grade "EPS foam panels.
Australia Wool testing Authority, Ltd.
1st Floor, 191 Racecourse Road
Flemington, Victoria 3031.
AWTa Test Number: 19-001863
AWTa Test report Issue Date: 15/4/2019
4. AWTa Product Testing.
ASTM C518-2017 Testing:
Steady State Thermal Transmission Properties by means of the Heat Flow Apparatus.
Testing to M grade RMAX Orange Board EIFS cladding Panel.
Australia Wool testing Authority, Ltd.
1st Floor, 191 Racecourse Road
Flemington, Victoria 3031.
AWTa Test Number: 19-001866
AWTa Test report Issue Date: 16/4/2019
5. AWTa Product Testing
ASTM E96 Determination of Water Vapour transmission Rate of X28 100mm thick panel and M grade 19g/l 75mm thick and 100mm thick panel.
Australian Wool Testing Authority Ltd,
1st Floor, 191 Racecourse Road,
Flemington, Victoria. 3031.
Test Number 1 X28 grade :18-006352
Test Report Issue Date: 12/11/18
Test Number 2 M grade 75mm thick : 19-002199
Test Report Issue Date: 20/05/19
Test Number 3 M grade 100mm thick : 19-002197
Test Report Issue Date: 20/05/19
6. Exova Warringtonfire BAL 29 test report and BAL 29 test certificate
RMAX EIFS BAL 29 compliance test & report.
Exova BAL 29 Report No: EWFA 478899700.1
Exova BAL 29 Certificate No: SFC 478899700.1
Exova Warringtonfire Aus, Pty Ltd.
Unit 2, 409-411 Hammond Road, Dandenong Victoria, 3175, Australia.
Certificate Issue date: 14/4/ 2017.
7. Ian Bennie and Associates
Nata Registered Testing Laboratory No 2371.
RMAX Orange Board Direct Fix EIFS weatherproofing Cladding Façade test as undertaken to NCC 2016
Verification Methods FV1 and V2.2.1.
Test Report Number: 2018-080-S4
Report Issue Date: 3/12/2018
8. James M Fricker Pty Ltd
54 Felix Crescent Ringwood North, Vic 3134.
Total "R" (Thermally bridged) Thermal Performance calculations to AS/NZS 4859 Parts 1 and 2: 2018 of RMAX Direct fix EIFS system utilising 75 mm and 100mm thick panel.
Report Issue Date: 18/2/2019
9. Petrovic Engineering Professional
Assessment Report RMAX Range of EIFS Cladding Panel Systems Wind Pressures above 10m Height.
Petrovic Engineering Document No: 17-13-01
Assessment letter issue date: 27/2/ 2017.
10. VIPAC RMAX EIFS Batten Cavity Structural testing report.
Test reference application Standards covered: AS/NZS 1170.2:2012 Structural design actions Part 2: Wind Loads.
AS4055:2012 Wind loads for housing
AS1562.1:1992 Design and Installation of sheet roof and wall cladding
AS4040.2 Method 2: resistance to wind pressures for non cyclonic regions
AS 4040.3 Method 3: Resistance to wind pressures for cyclonic regions
AS/NZS 4284:2008 Testing of building facades Melbourne Victoria, Australia
VIPAC Engineers and Scientists Ltd,
279 Normanby Road,
Port Melbourne, Vic, 3207
Report issue date: 15/5/2013.
11. NCC 2019 Climate Zone Requirements as shown on page 5 Image and table sourced from the Australian Building Codes Board (ABCB) website at: <https://www.abcb.gov.au/Resources/Tools-Calculators/Climate-Zone-Map-Australia-Wide>.
12. Figure 2, page 5: Australian map wind region information.
Graphic and Information derived from the following web page:
https://www.dlswb.rmit.edu.au/toolbox/buildright/content/bcgbc4010a/08_bca_requirements/02_high_wind/page_001.htm



RMAX Recyclable EPS

RMAX and the Environment

The RMAX Direct Fix EIFS Cladding range of products are highly energy efficient. The energy saved over the lifetime of an RMAX Direct Fix EIFS Cladding Product Range panel in reduced heating demand, more than compensates for the raw material used in its production.

The effective application of EPS insulation can cut carbon dioxide emissions by up to 50%. The energy used in its manufacture may be recovered within six months by the energy saved in the buildings when EPS is used to insulate the building depending on the building design and the climatic conditions.

RMAX promotes the use of EPS, with their superior thermal insulation properties, to lower energy requirements and reduce the impact of buildings on the environment.

RMAX EPS is free from ozone depleting substances in manufacture and composition. EPS is manufactured without CFCs, HCFCs or HFCs. Manufacturing is done with blowing agents that have Zero Ozone Depleting Potential (ODP).

Recycling EPS

EPS products are recyclable and RMAX has established recycling facilities in all of its plants throughout Australia. RMAX is a member of PACIA (Plastics and Chemical Industries Association).

Energy Efficient Manufacture

The manufacture of EPS is a low pollution process. There is no waste in production as all off cuts or rejects are re-used or recycled.

RMAX – Innovation Working for You

RMAX is a company driven by innovation. We have pioneered Rigid Cellular Plastics product technologies, leading the development of innovative product solutions for our customers and international partners.

Other innovative products from RMAX are ThermaSlab™ and ThermaProof™. For details on these and other products in our range, visit www.rmax.com.au.

We are committed to working with our customers to deliver high quality creative solutions to construction problems. Contact us and see how our innovative approach using EPS in building construction can help you.

Developed in Australia. Made in Australia.

The RMAX Direct Fix EIFS Cladding Product Range has been developed in Australia by RMAX specifically for Australian conditions and to meet the stringent Australian Building Codes in all states. It is manufactured in RMAX plants around Australia in controlled production processes to maintain consistent quality.



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The pictures and illustrations shown in this brochure are for illustrative purposes only, to demonstrate creativity and design and construction flexibility. They do not imply that any of the RMAX Direct Fix EIFS Cladding panel types were used in their construction.

RMAX is a division of Huntsman Chemical Company Australia Pty. Limited. ABN 48 004 146 338



Enriching lives through innovation

