

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

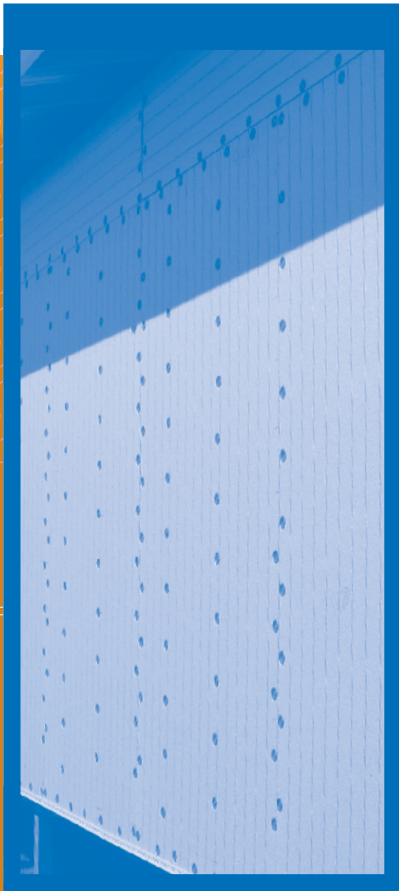


EXTERNAL INSULATED FINISHING SYSTEM (EIFS) CLADDING

Codemark  
Accredited

BAL-29 Compliant

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



**RMAX EIFS  
Grooved Cladding  
Panel**



**RMAX EIFS  
Cladding Panel**



**RMAX EIFS  
Pre-Rendered Cladding  
Panel**

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



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**NOTE:**

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](http://www.rmax.com.au)



## INTRODUCTION

The RMAX Direct Fix EIFS Cladding Product Range comprises an extensive range of Standard Isolite® (orange) and Premium ThermaSilver® (dark grey) Expanded Polystyrene (EPS) panel building products that are all manufactured in Australia. These Exterior Insulation and Finishing Systems (EIFS) have been independently tested by 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 in both the Standard and Premium grades of RMAX EPS.**

### CodeMark™ Certification



**CODEMARK™**

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 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 for use in class 1 and 10 buildings and class 2 and 3 buildings of type C construction, to the relevant Building Code of Australia (BCA) codes relating to:

- Structural Integrity
- Weatherproofing
- Fire Hazard Properties
- Construction in Bushfire Prone Areas
- Energy Efficiency
- Energy Efficiency for External Walls
- Insulation

For further information, please refer to page 5 (Copy of the RMAX Orange Board® CodeMark™ certificate). The information presented in the RMAX Orange Board® CodeMark™ certificate is mirrored for all other products in the RMAX Direct Fix EIFS Cladding Product Range. Page 4 of the brochure indicates the summary of CodeMark™ certificates covering the remainder of the products that make up the RMAX Direct Fix EIFS Cladding Product Range.

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](http://www.rmax.com.au), or can be sourced directly through your local RMAX Direct Fix EIFS Cladding Product Range distributor.

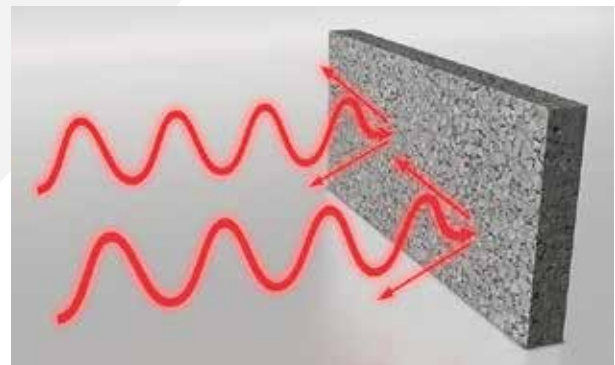
### Standard RMAX EIFS Cladding Product Range Description

The standard RMAX EIFS Cladding Product range of panels are all manufactured from Isolite® closed cell orange EPS bead material (density Grade M) that is a resilient, lightweight rigid cellular plastic. **The entire product range of panels can be supplied with or without the Perform Guard® – Termite Resistant additive, as part of their composition. The exclusive Perform Guard® patented technology incorporates a safe, non-toxic inorganic additive that is a deterrent to termites.**

### Premium RMAX EIFS EPS Cladding Product Description



The Premium RMAX range of EIFS Cladding panels are all manufactured from the patented Neopor® EPS BASF expandable polystyrene bead material (density Grade M) which is dark grey in colour. The BASF Neopor® based RMAX ThermaSilver® premium material is a higher performing EPS material when compared to standard Isolite® EPS, due to the inclusion of graphite particles within its cellular structure. Graphite acts as an infra red reflector and absorber which results in the ThermaSilver® premium EPS material exhibiting reduced thermal conductivity compared to standard Isolite® EPS resulting in an improved R value when the same thickness and density of materials are compared.



**Photo 1. Infra red reflection and absorption from the surface of the Premium RMAX ThermaSilver® EIFS Cladding panel.**

**This means that builders and designers seeking to achieve the six star energy rating can get improved insulation performance with the same board thickness or conversely achieve the same energy rating as the standard Isolite® EPS panel using a thinner panel. The insulation effect of the RMAX ThermaSilver® Premium cladding product range of panels can be up to 16% higher when compared with the Standard RMAX Cladding Product Range of panels as manufactured with standard Isolite® EPS.**

## INTRODUCTION

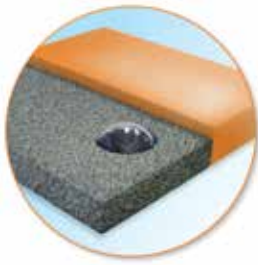


Photo 2. RMAX Premium ThermaSilver® (dark grey coloured panel) and standard Isolite® (orange coloured panel) EIFS Cladding Panels.

### RMAX EIFS Grooved Cladding Panel Product Description

The RMAX Direct Fix EIFS EPS grooved panel product is made up of RMAX Standard or Premium grade EPS (M Grade density) panels 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 increased anchoring of the applied render finishing systems to the panel face and also act as a convenient locator for the fixing screws and washers resulting in greater ease of installation to the frame. Refer to page 10 for panel construction diagram.



Photo 3. Installed RMAX Direct Fix EIFS EPS Grooved Cladding panels.



Photo 4. 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 4.

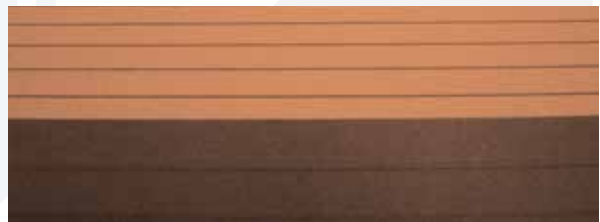


Photo 5. Horizontal groove orientation running across the width of the panel at 75mm spacings.

#### 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 5.

### RMAX EIFS Pre-Rendered Cladding Panel Product Description

The RMAX Pre-Rendered EIFS Cladding panels are made up of Standard or Premium EPS panels (M Grade density) core reinforced with high strength alkaline resistant 160gsm fibreglass mesh and the enhanced render surface coating (grey in colour), to provide strength and high impact resistance.

The render coating is a durable textured surface ready to accept compatible renders to achieve a variety of finishes. Contact your local architectural coating manufacturer for products that suit pre-rendered EIFS EPS panels and for an application sheet. RMAX Pre-Rendered panels offer the pre rendered coating on one side and are suitable for both straight and curved wall applications.



Photo 6. RMAX EIFS Pre-Rendered Cladding Panels.

## INTRODUCTION

### 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 either the RMAX Standard or Premium EPS cladding panel (M Grade density), together with the RMAX Orange Board® 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 Board Cladding system must be installed with the RMAX EIFS cladding panel in conjunction with the Orange Board® fasteners, screws and washers and the proprietary RMAX Orange Board® Render system. Refer to page 12 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 relevant Australian building codes and practices. For a full list of referenced tests and reports refer to page 37.



**Photo 7. Top storey illustrates the finished rendered EIFS building facade whilst the bottom storey shows the standard RMAX EIFS Cladding Panels as installed directly to the stud frame.**



**Photo 8. Complete RMAX Orange Board® render finished EIFS Cladded wall.**



Certificate Holder



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Certification Body



**CertMark International Pty Ltd**  
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 ABN: 80 111 217 568  
 PO Box 7144, Sippy Downs Qld 4556  
[www.CertMark.org](http://www.CertMark.org)

# SUMMARY OF CERTIFICATES

RMAX have the following Products Certified under the CodeMark™ Scheme

Badge	Product Name	Certificate Number	Issue Date	Expiry Date
CMA-CM40039	Orange Board®	CMA-CM40039	17/07/2014	17/07/2017
CMA-CM40112	Thermawall®	CMA-CM40112	17/07/2014	17/07/2017
CMA-CM40114	ThermaWallPlus®	CMA-CM40114	17/07/2014	17/07/2017
CMA-CM40115	Isolite® EPS Panels (Grand M)	CMA-CM40115	17/07/2014	17/07/2017
CMA-CM40116	Thermawall® Silver	CMA-CM40116	17/07/2014	17/07/2017
CMA-CM40117	ThermaWallPlus® Silver	CMA-CM40117	17/07/2014	17/07/2017
CMA-CM40118	ThermaSilver® Board	CMA-CM40118	17/07/2014	17/07/2017

**John Thorpe**  
 CertMark International Pty Ltd

**Version 1**

It is advised to check that this Certificate of Conformity is currently valid and not withdrawn, suspended or superseded by a later issue by referring to the CMI website [www.CertMark.org](http://www.CertMark.org).



# CERTIFICATE OF CONFORMITY

This is to certify that



**Orange Board®**



### Product Description

The RMAX Orange Board® external insulation finishing System (EIFS) panels, are made from Isolite® closed cell orange expanded polystyrene (EPS) bead material (density grade M). The panels are supplied together with RMAX Orange Board® render, screws and washers forming the RMAX Orange Board® system. Panels are fixed to the structural frame using 10G class 3 screws and 40mm diameter washers either direct to the frame or through EPS battens to create a cavity. Various panel thicknesses are available. The minimum panel thickness covered by this certification is 60mm.

### Product Purpose or Use

The RMAX Orange Board® Direct Fix or Batten Cavity Fix Systems are external insulation finishing systems (EIFS). Either system can be fixed to steel or timber frames

### Certificate Holder

<b>RMAX</b> 2-4 Mephan Street Maribyrnong VIC 3032 Ph: 61 3 9318 4422 W: <a href="http://www.rmax.com.au">www.rmax.com.au</a>	VIC: <a href="mailto:vicsales@rmax.com.au">vicsales@rmax.com.au</a> QLD: <a href="mailto:qldsales@rmax.com.au">qldsales@rmax.com.au</a> WA: <a href="mailto:wasaales@rmax.com.au">wasaales@rmax.com.au</a> SA: <a href="mailto:sasales@rmax.com.au">sasales@rmax.com.au</a> NSW: <a href="mailto:nswsales@rmax.com.au">nswsales@rmax.com.au</a> TAS: <a href="mailto:tassales@rmax.com.au">tassales@rmax.com.au</a>
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### CodeMark™ Certification Body

CertMark International Pty Ltd  
T/A CertMark Australia  
(ABN) 80 111 217 568  
JAS-ANZ Accreditation No. Z4450210AK  
P: 1800 CertMark  
PO Box 7144, Sippy Downs Qld 4556  
[www.CertMark.org](http://www.CertMark.org)

### Complies with the Building Code of Australia:

1. BCA 2014 Volume One BP1.1 "Structural" (a), (b) i, ii, iii, for external wall cladding (see conditions a) to g))
2. BCA 2014 Volume One FP1.4 "Weatherproofing" for external wall cladding (see condition h)
3. BCA 2014 Volume One C1.10 "Fire Hazard Properties" as a Group 1 material, including NSW variation (see condition i))
4. BCA 2014 Volume One GPS.1 "Construction in Bushfire Prone Areas" for external wall cladding, including NSW, QLD, TAS variations (see condition i))
5. BCA 2014 Volume One JP1 "Energy Efficiency" for external walls, including NSW, NT, QLD variations (see condition i))
6. BCA 2014 Volume Two P2.1.1 "Structural" (a), (b) i, ii, iii, for external wall cladding (see conditions a) to g))
7. BCA 2014 Volume Two P2.2.2 "Weatherproofing" for external wall cladding (see condition h))
8. BCA 2014 Volume Two P2.3.4 "Bushfire Areas" for external wall cladding, including TAS variation (see condition i))
9. BCA 2014 Volume Two P2.6.1 "Energy Efficiency" for external walls, including Vic variation (see condition j))

### Subject to the following Conditions & Limitations:

- a. Systems must be installed in accordance with the respective RMAX Technical Data and Installation Manual (July 2014 Direct Fix or July 2014 Batten Cavity).
- b. For use in class 1 and 10 buildings, and class 2 and 3 buildings of Type C construction.
- c. Fixing screws must be 25 mm longer than the panel thickness for timber frame construction and 15 mm longer than the panel thickness for steel frames.
- d. Fasteners must be offset 20mm from stud edge.
- e. In cyclonic wind regions, panel joints must incorporate a double stud. Shared studs may only be used if project specific engineering approval is provided.
- f. Wind load resistance is dependent on panel thickness, stud spacing and fastener spacing. Please see RMAX Technical Data and Installation Manual (July 2014 Direct Fix or July 2014 Batten Cavity) for performance ratings.
- g. Minimum BMT of steel frames must be 1.0mm.
- h. The system must be installed with breathable sarking installed behind the EPS.
- i. Suitable for applications up to a maximum of BAL-29 when constructed using 75mm thick board with minimum 8.2mm thick RMAX render system on external face of external walls, 90mm x 45mm timber frame and 10mm thick plasterboard on internal face. Only valid when rendered side faces fire front.
- j. Product will contribute to compliance subject to the relevant thermal properties which may vary with panel thickness. Refer RMAX Technical Data and Installation Manual (July 2014 Direct Fix or July 2014 Batten Cavity) for suitable constructions and climate zone information.

*[Signature]*  
**John Thorpe**  
CertMark International Pty Ltd

*[Signature]*  
**Don Grehan**  
Unrestricted Building Certifier

17/07/2014 **Date of Issue**  
17/07/2017 **Date of Expiry**  
CMA-CM40039 **Certificate Number**

• This Certificate of Conformity is issued by an accredited certification body under arrangement with JAS-ANZ. The ABCB does not in any way warrant, guarantee or represent that the Product the subject of this Certificate of Conformity conforms to the BCA, nor accepts any liability arising out of the use of the Product. The ABCB disclaims to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this Certificate.

• It is advised to check that this Certificate of Conformity is currently valid and not withdrawn, suspended or superseded by a later issue by referring to the ABCB website, [www.abcb.gov.au](http://www.abcb.gov.au).



## COMPLIANCE

### Codemark Compliance Requirements

RMAX Panel Range	EIFS Panel type	Panel Thickness mm	Building class	Terrain category applicability	Topographic class applicability	Framing	Installation height	Batten Type (only applicable to batten cavity EIFS construction)
RMAX Standard and Premium EIFS EPS Cladding Panels	Plain	60 75 100	1 & 10	1 to 3 (all Terrain categories)	T1	Timber	≥10 metres	RMAX 1250mm x 40mm x 25mm X28 density grade white Isolite® EPS cavity battens
	Pre rendered		2 to 9	-	T2 -T3	Steel	≤ 10 metres	Non RMAX Cavity battens

### BAL 29 Compliance Requirements

RMAX Panel Range	EIFS Panel type	Panel Thickness mm	Building class	Framing	Batten Type (only applicable to batten cavity EIFS construction)	Render type	Render Thickness	Screw Type
RMAX Standard and Premium EIFS EPS Cladding Panels	Plain	75 100	1 & 10	Timber	RMAX 1250mm x 40mm x 25mm X28 density grade white Isolite® EPS cavity battens	RMAX Orange Board® render	8-10mm	10G CSK Head Coarse ribbed class 3 needle point galvanised (Screw length dependant on panel thickness )
	Pre rendered		2 to 9	Steel	Non RMAX Cavity battens	Other acrylic renders	below 8mm	other screw types

**NOTE: BAL 29 conformance applies to 75mm and 100mm thick RMAX Direct Fix EIFS Cladding Products only. 60mm thick panel products have not been tested to BAL 29.**



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

Render type	Render Thickness	Screw Type	Washer type	Reinforcing mesh	Sarking
✓ RMAX Orange Board® render	✓ 8-10mm	✓ 10G CSK Head Coarse ribbed class 3 needle point galvanised (Screw length dependant on panel thickness )	✓ 40mm diameter plastic RMAX Orange Fasteners	✓ Minimum160gsm Alakline resistant Fibreglass mesh	✓ Vapour permeable sarking
✗ Other acrylic renders	✗ below 8mm	✗ other screw types	✗ other fastener types	✗ Non 160gsm Alakline resistant Fibreglass mesh	✗ Non Vapour permeable sarking

Washer type	Reinforcing mesh
✓ 40mm diameter plastic RMAX Orange Fasteners	✓ Minimum160gsm Alakline resistant Fibreglass mesh
✗ other fastener types	✗ Non 160gsm Alakline resistant Fibreglass mesh

## DESIGN CRITERIA

### 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.

### Frame Structure

The frame structure must be built in accordance with the Building Code of Australia (BCA) codes and with all relevant Australian Standards that apply, for instance, AS 1684-1999 for Timber Frame structures and AS 3623-1993 for Steel Frame structures.

### RMAX EIFS EPS Panel Fasteners

Each fastener is composed of:

- 1 galvanised steel screw
- 1 plastic washer

Details of each component are given in Table 1.

**Table 1: Panel fixing components details**

Fasteners	Timber frame	Steel frame
<b>Screw</b> (60mm panel)	10G x 85mm CSK Head Coarse Ribbed Class 3	10G x 75mm Wing Tek Class 3
<b>Screw</b> (75mm panel)	10G x 100mm CSK Head Coarse Ribbed Class 3	10G x 90mm Wing Tek Class 3
<b>Screw</b> (100mm panel)	10G x 125mm CSK Head Coarse Ribbed Class 3	10G x 115mm Wing Tek Class 3
<b>Washer</b>	40mm diameter plastic RMAX washer	

NOTE: Screw length is dependant on the thickness of RMAX 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 to be 20mm. Where two panels butt up against each other, edge to edge, a double stud is to be used, allowing each panel to be fastened to its own individual stud. Refer to fastener fixing detail on pages 21 and 22 for further 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 & B)						Cyclonic (C & D)			
	N1	N2	N3	N4	N5	N6	C1	C2	C3	C4
Panel Thickness (mm)	60, 75, 100						75, 100			
Stud spacing (mm)	300, 450, 600				300, 450		300			
Fastener spacing (mm)	300 (150 at perimeter of wall)	300 (150 at perimeter of wall)	300 (150 at perimeter of wall)	300 (150 at perimeter of wall)	300 (150 at perimeter of wall)	200 (150 at perimeter of wall)	200 (150 at perimeter of wall)	200 (150 at perimeter of wall)	200 (150 at perimeter of wall)	200 (150 at perimeter of wall)
Number of fasteners/m <sup>2</sup>	12	12	12	12	12	18	18	18	18	18

### 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 37, reference no. 7.

The limitations of the following fixing provisions are:

- Building height to eaves or ridge less than or equal to 10.00 m.
- 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 wind regions A, B, C and D 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.**

## DESIGN CRITERIA

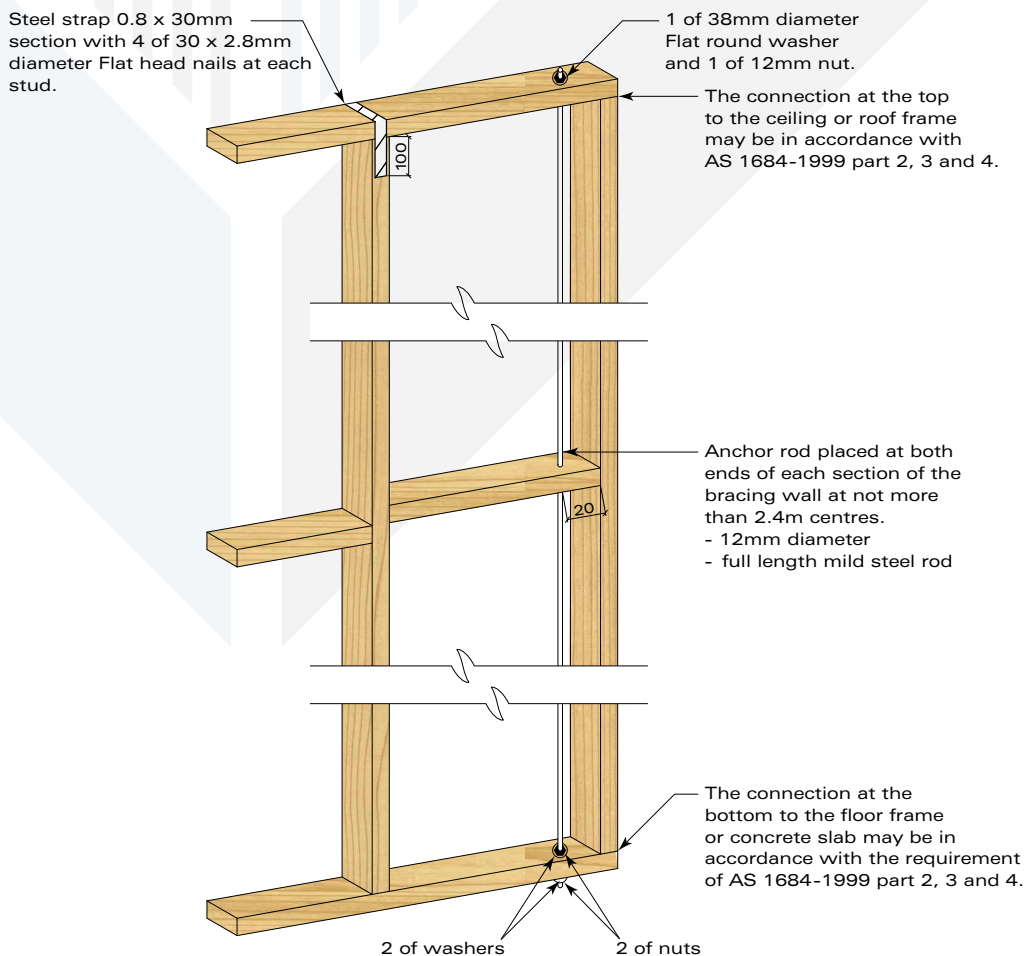
### Structural Bracing Capacity

The RMAX Direct Fix EIFS Cladding Product Range was tested in racking tests in accordance with AS 4040.0-1992, AS 4040.2-1992 and AS 4040.3-1992 for non-cyclonic and cyclonic conditions (Regions A, B, C and D) by an accredited laboratory. Page 37 reference no. 12.

The obtained bracing capacities at 2.70m (as defined in AS 1684-1999 "Residential timber framed construction" – Part.2: Non- cyclonic areas; Part.3: Cyclonic areas and Part. 4: Simplified – Non-cyclonic areas), in serviceability conditions are summarised in Table 3.

**Table 3: Structural bracing capacity (kN/m at 2.70m height) of RMAX EIFS wall systems applicable in Regions A and B (Non-cyclonic) and Regions C and D (Cyclonic)**

Panel	Frame reinforcement	Wind Region	Stud spacing (mm)	Fastener spacing (mm)				
				300	200	150	120	100
Structural bracing capacity (kN/m at 2.70m height) of RMAX EIFS wall systems applicable in regions A and B (Non-cyclonic) and regions C and D (Cyclonic)	Nil	A and B	450 or 600	1.15	1.35	1.40	1.50	1.55
RMAX EIFS Direct Fix EIFS Cladding Product Range	Vertical Bracing Reinforcement 12mm diameter steel rod at 500mm from the corner where the racking force is applied. Galvanised straps at the top only.	C and D	450 or 600					3.85



### Bracing Reinforcement

## TECHNICAL SPECIFICATIONS

### Standard Tolerances

**Table 4: Panel Dimensions**

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

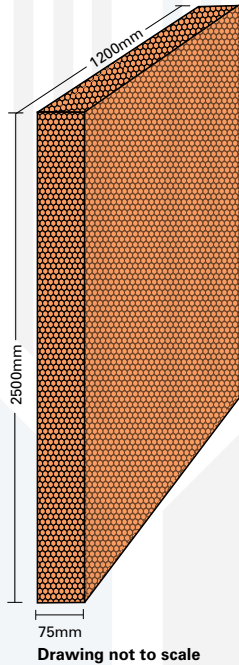
**Table 5: Nominal panel surface mass (kg/m<sup>2</sup>) – unrendered**

Thickness (mm)	Surface Mass
60mm	1.14
75mm	1.43
100mm	1.90

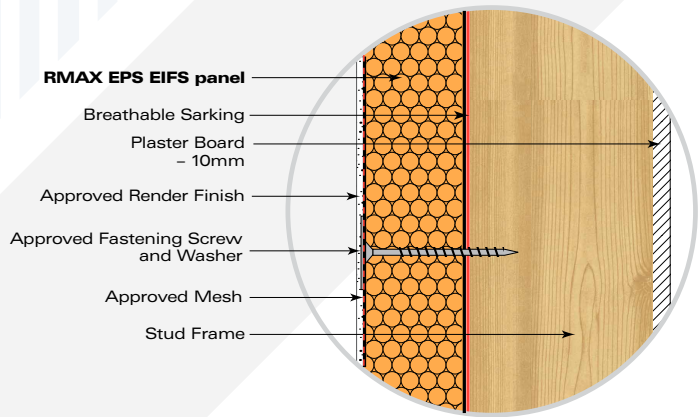
**Table 6: Sheet weight in kg – unrendered (EPS panel only)**

60mm	75mm	100mm
3.4	4.3	5.7

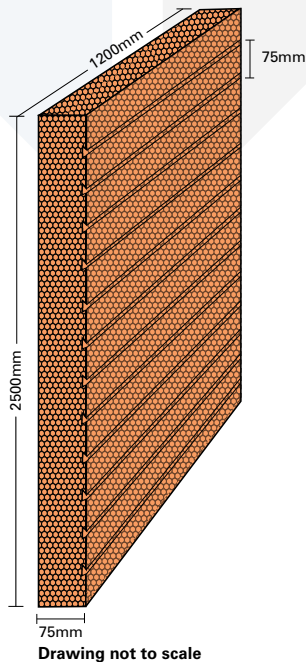
**Figure 2: RMAX EPS EIFS Cladding Panel**



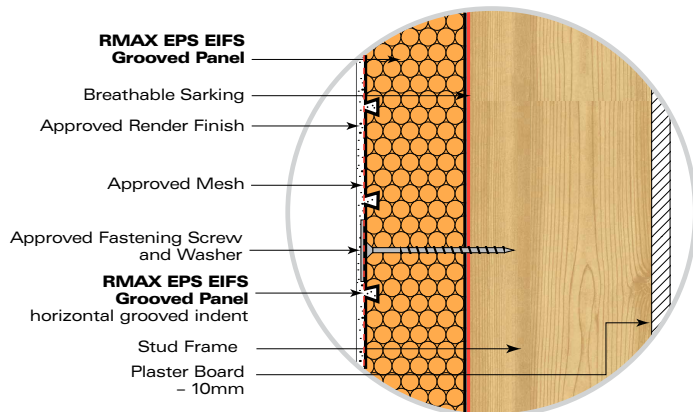
**Figure 3: Example of the installed RMAX EPS EIFS Pre-Rendered and Plain Cladding Panel.**



**Figure 4: RMAX EPS EIFS Grooved Cladding Panel**



**Figure 5: Example of the Installed RMAX EPS EIFS Grooved Cladding Panel.**



## TECHNICAL SPECIFICATIONS

### Thermal Insulation

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

Panels thickness	60mm	75mm	100mm
Thermal conductivity at 23°C (W/m <sup>2</sup> K)	0.037		
R value at 23°C (m <sup>2</sup> K/W)	1.60	2.05	2.70
Thermal conductance at 23°C (W/m <sup>2</sup> K)	0.60	0.50	0.37

**Table 8: R Value of Premium RMAX Direct Fix EIFS EPS Cladding Panels**

Panels thickness	60mm	75mm	100mm
Thermal conductivity at 23°C (W/m <sup>2</sup> K)	0.0321		
R value at 23°C (m <sup>2</sup> K/W)	1.86	2.32	3.10
Thermal conductance at 23°C (W/m <sup>2</sup> K)	0.54	0.43	0.32

### Standard and Premium RMAX Direct Fix EIFS Cladding Wall System Thermal Performance.

From calculations by thermal calculation code recognised by CSIRO, the total R value for both the standard and premium RMAX Direct Fix EIFS Cladding wall systems are given in the following tables.

**Note: The R value calculations below 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 8mm thick render finish coating applied.**

**Table 9: Total R value of Standard RMAX Direct Fix EIFS EPS Cladding wall system**

Total R value of Standard RMAX Direct Fix EIFS EPS Cladding wall system		
Standard Cladding panel thickness (mm)	Total R value Summer (m <sup>2</sup> K/W)	Total R value Winter (m <sup>2</sup> K/W)
60	1.93	2.04
75	2.32	2.44
100	2.96	3.12

**Table 10: Total R value of Premium RMAX Direct Fix EIFS EPS Cladding wall system**

Total R value of Premium RMAX Direct Fix EIFS EPS Cladding wall system		
Premium Cladding panel thickness (mm)	Total R value Summer (m <sup>2</sup> K/W)	Total R value Winter (m <sup>2</sup> K/W)
60	2.22	2.34
75	2.67	2.82
100	3.43	3.62

Standard or Premium RMAX EIFS EPS cladding systems installed with a reflective breathable sarking as part of the wall system will increase the overall thermal effectiveness of the wall system.

**Table 11: Total R value of Standard RMAX Direct Fix EIFS EPS Cladding wall system with reflective sarking**

Total R value of Standard RMAX Direct Fix EIFS EPS Cladding wall system, including reflective sarking		
Standard Cladding panel thickness (mm)	Total R value Summer (m <sup>2</sup> K/W)	Total R value Winter (m <sup>2</sup> K/W)
60	2.41	2.51
75	2.79	2.92
100	3.43	3.59

**Table 12: Total R value of Premium RMAX Direct Fix EIFS EPS Cladding wall system with reflective sarking**

Total R value of Premium RMAX Direct Fix EIFS EPS Cladding wall system including reflective sarking		
Premium Cladding panel thickness (mm)	Total R value Summer (m <sup>2</sup> K/W)	Total R value Winter (m <sup>2</sup> K/W)
60	2.69	2.81
75	3.15	3.29
100	3.90	4.10

## TECHNICAL SPECIFICATIONS

### BAL Bush Fire Attack Level

After the Canberra bushfires in 2003, the Australian Standard relating to building was reviewed and a new Australian Standard (AS 3959) was introduced nationally in 2009.

The new building standard has six risk levels (Bushfire Attack Levels-BALs). There are increasing construction requirements that range from ember protection at the lower levels to direct flame contact protection at the highest. The new building standard increases the construction requirements on residential buildings so they are better bushfire protected.

Products used in external construction of houses should have a BAL rating to ensure that building is undertaken in such a way that risk to people and property is minimised.

It is a 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.


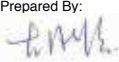

To meet the BAL 29 conformance requirements as tested by Exova Warringtonfire, RMAX Orange Board® render must be used and applied at a minimum thickness of 8mm.

**The BAL 29 conformance applies to 75mm and 100mm RMAX Direct Fix EIFS Cladding products only.**

**PLEASE NOTE: The use of any render system other than the RMAX Orange Board® render, applied at minimum thickness of 8mm, may or may not meet the requirements of the BAL 29 certification.**

It would be expected that similarly formulated acrylic render products would deliver similar BAL performance, however, RMAX has not tested other render systems.

The results of the BAL 29 testing are summarised in the Exova test certificate as shown below, covering both the Standard and Premium ranges of RMAX Direct Fix EIFS Cladding products.

Exova Warringtonfire Aus Pty Ltd Suite 2002a, Level 20 44 Market Street Sydney, New South Wales 2000 Australia  Postal Address: Suite 2002a, Level 20 44 Market Street Sydney, New South Wales 2000 Australia		T: +61 (0)2 8270 7600 F: +61 (0)2 9299 6076 W: www.exova.com		
Testing. Advising. Assuring.				
<b>EWFA CERTIFICATE OF ASSESSMENT</b>		CERTIFICATE No : SFC 27710-03		Page 1 of 1
<b>Report Sponsor</b>  RMAX 2-4 Mephan Street Maribymong VIC, 3032		<b>Certificate Issue Date</b>  29/05/2013		<b>Product Name</b>  RMAX Orange Board® RMAX Isolite® Expanded Polystyrene Block RMAX Orange Board® with PerformGuard® RMAX ThermaWall® RMAX ThermaWall® Plus RMAX ThermaSilver® Board RMAX ThermaWall® Silver RMAX ThermaWall® Plus Silver
<b>Assessment Report Reference</b> EWFA 27710-02		<b>Referenced Standard</b> AS 1530.8.1- 2007	<b>Report Issue Date</b> 29/05/2013	<b>Report Validity Date</b> 30/09/2017
<b>Introduction</b>				
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.				
<b>Assessed Framed Wall system description and performance</b>				
<b>Framed wall Description</b>  Wall system consisting of timber framing or light gauge steel framing at least 70mm deep. Unexposed side faced with 10mm Gyprock plasterboard. Exposed side with 8.2mm RMAX Orange Board® render system coated over 75mm and 100mm thick RMAX Orange Board®, RMAX Isolite® Expanded Polystyrene Block, RMAX Orange Board® with PerformGuard®, RMAX ThermaWall® Board, RMAX ThermaWall® Plus Board, RMAX ThermaSilver® Board, RMAX ThermaWall® Silver Board or RMAX ThermaWall® Plus Silver Board. Wall system optionally includes 40mm wide x 25mm deep EPS battens directly attached to the framing, the RMAX EPS panels are then fastened to the stud frame through the battens. Refer the referenced report for a complete description of the assessed construction.				<b>BAL</b>  <b>BAL A-29</b>
<b>Conditions/Validity</b>				
<ul style="list-style-type: none"> <li>THIS CERTIFICATE IS PROVIDED FOR GENERAL INFORMATION ONLY AND DOES NOT COMPLY WITH THE REGULATORY REQUIREMENTS FOR EVIDENCE OF COMPLIANCE.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>Full copies of the assessment and relevant test reports may be obtained from the sponsor.</li> </ul>				
<b>TESTING AUTHORITY</b>				
<b>Address</b>		Exova Warringtonfire Aus Pty Ltd Suite 2002a, Level 20, 44 Market Street, Sydney NSW 2000, Australia		
<b>Phone / Fax</b>		+61 (0)2 8270 7600 / +61 (0)2 9299 6076		
<b>ABN</b>		81 050 241 524		
<b>Email / Home Page</b>		www.exova.com		
<b>Authorisation</b>		Prepared By:  S. Hu		Reviewed By:  K. G. Nicholls

## 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 13 have been determined.

**Table 13: Early Fire Hazard Properties of the RMAX Direct Fix EIFS Cladding Product Range**

Material	Ignitability Index (0-20)	Spread of Flame (0-10)	Heat Evolved Index (0-10)	Smoke Produced Index (0-10)
<b>RMAX Direct Fix EIFS Cladding Product Range</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
An Australian Hardboard (4.75mm)				
– Bare	14	6	7	3
– Impregnated with fire retardant	4	0	0	7
An Australian Softboard (12.70mm)				
– Bare	16	9	7	3
– Impregnated with fire retardant	4	0	0	7
T&G Boarding (25 x 100mm)				
– Bluegum	11	0	3	2
– Oregon	13	6	5	3
Plywood, Coachwood Veneer (4.75mm)				
– Bare	15	7	7	4
– Impregnated with fire retardant	12	0	3	5

**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 14: 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)	44dB

**Table 15: 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.** Prolonged exposure to the elements should be avoided, including exposed edges.

Continuous exposure to the elements of unrendered RMAX Direct Fix EIFS Cladding panels may result in 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.**

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.

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 1.5 metres away from any exposed RMAX Direct Fix EIFS Cladding Product Range cladded panel wall.**

## TECHNICAL SPECIFICATIONS

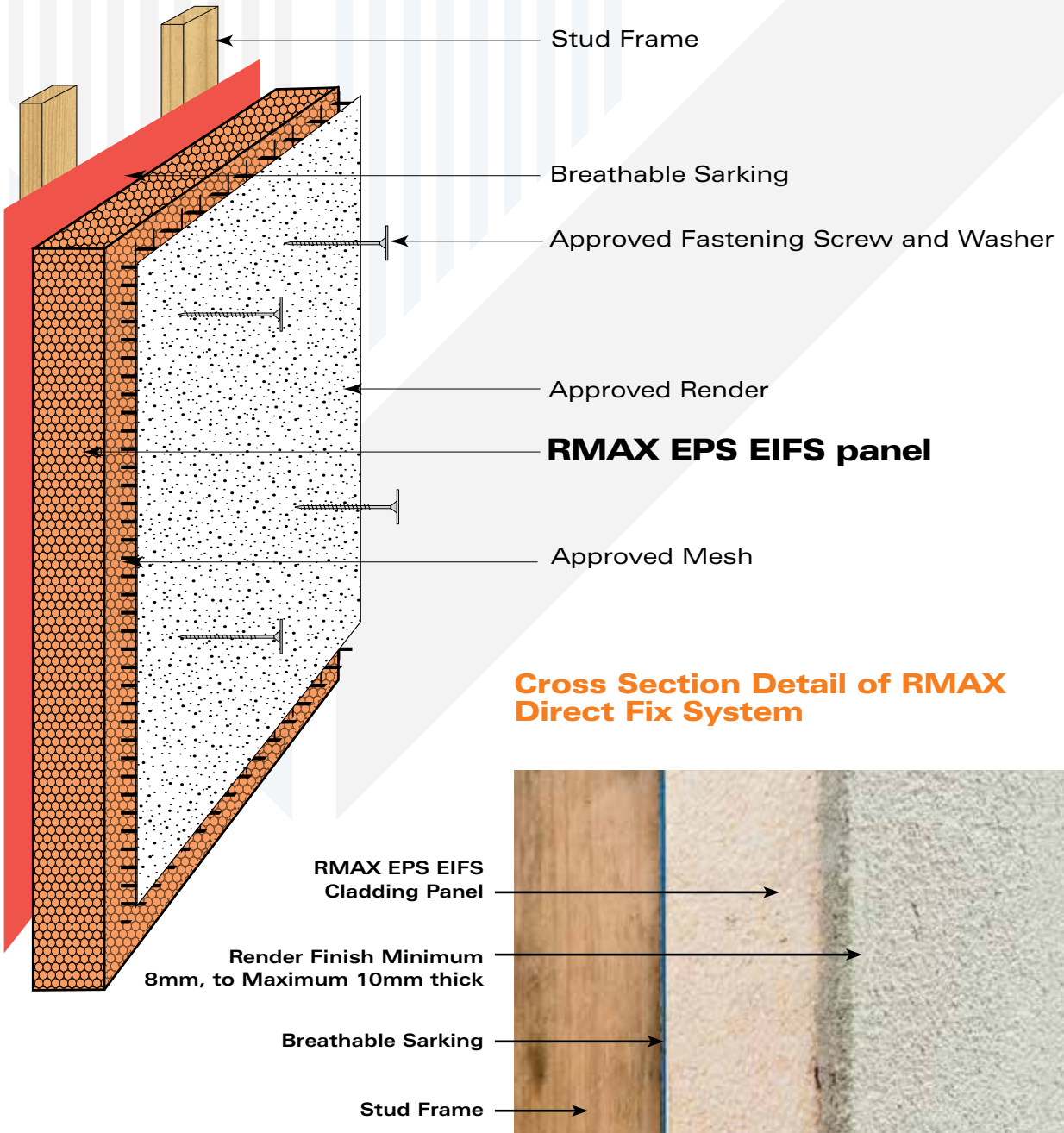
### Chemical Resistance

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.

### 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.

## INSTALLATION GUIDELINES



**Cross Section Detail of RMAX Direct Fix System**

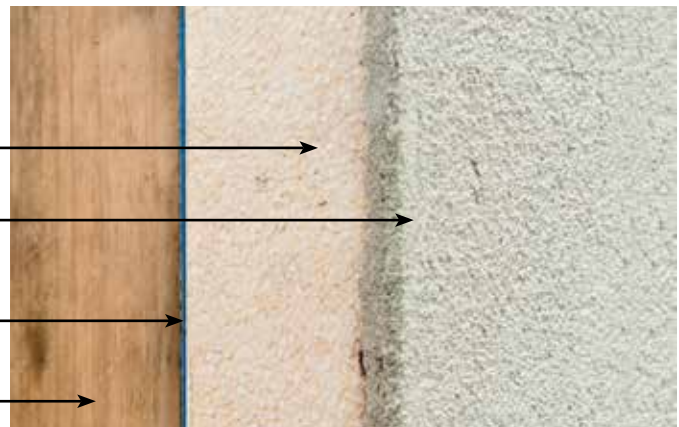


Photo 9. Cross section of complete RMAX Direct Fix EIFS Cladding System.



## 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.

It should be noted that RMAX Direct Fix EIFS Cladding panels installed in conjunction with a reflective breathable sarking will increase the overall thermal effectiveness of the wall system. Refer to tables 11 and 12 page 11.

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 2014 code requirements.



Photo 10. 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. **Sheets should not be bonded (glued) to studs.** This allows the frame to flex without stressing the external render.



Photo 11. 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 construction adhesive. Contact your local RMAX distributor for a list of compatible 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 foam adhesive already applied. The foam adhesive will expand to fill any gaps between the panels as they cure. This helps to maintain water and weather tightness of the system.



Photo 12. Adhesive Foam application to panel ends.

### RMAX Pre-Rendered EIFS Cladding Panel Mesh Installation

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/m<sup>2</sup> 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 21 and 22. Typical Corner and Joint details are to be adhered to. Refer to pages 20, 23 and 24.



Photo 13. 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.

## INSTALLATION GUIDELINES

### Plain and Grooved EIFS Cladding Panel Mesh Application

Apply a 3-5mm basecoat of an applicable 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, 300mm long by 150mm wide, should be embedded across the corner of all window and door openings. Refer to page 20 window application detail. In the same sequence apply another coat of 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 14. Embedding of Fibreglass Mesh into first render coat.

### 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 21 and 22, 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 21 and 22. Typical Corner and Joint details are to be adhered to. Refer to pages 20, 23 and 24.

### 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.

### Beading

All 90° angle corners must be protected with aluminium bead. Any exposed edges (roof line, windows, doors, edge of concrete slab, etc.) should be covered with fibreglass mesh as specified on pages 20, 23, 24 and 26 and finished with an aluminium bead, which will protect the panel from moisture and provide a clean finish line for coatings. All beads should be fixed using a polystyrene compatible construction adhesive.

### Starter Channels

RMAX Direct Fix EIFS Cladding Panels are to be located in aluminium starter channels at the bottom edge of any RMAX Direct Fix EIFS Cladding wall as per ground slab rebate detail on page 28. Starter channels to include drainage weep holes (min 2mm diameter every 200mm) to allow moisture to escape. Typical bead detail can be found on page 28.

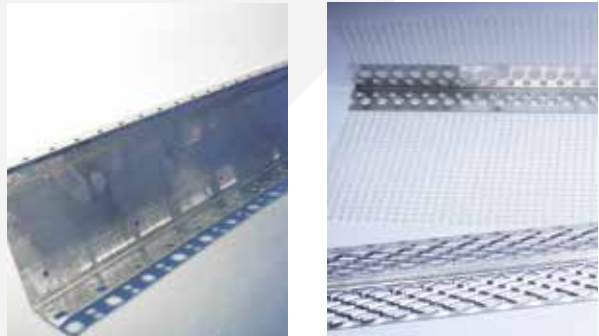


Photo 15. Aluminium Starter Channels and External Angles.

### 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.** This technical manual provides some practical details to perform the expansion joint. Refer to page 25 for more information.

### Render

RMAX recommends the use of the RMAX Orange Board® Render system, however other EPS EIFS compatible render systems may also be applicable. Check with your local supplier as to compatibility. **RMAX takes no responsibility for NON RMAX render coating performance, BAL performance and effect on surface properties of the RMAX Direct Fix EIFS Cladding Panels.**

## INSTALLATION GUIDELINES

Render to be applied strictly in accordance with the render manufacturer’s installation instruction requirements, in 2 coats, at a minimum thickness of 8mm and a maximum thickness of 10mm to ensure compliance to BAL 29 and Codemark™ Certification requirements.

### Curved Wall Applications

RMAX Direct Fix EIFS Cladding Panels can be used in curved wall applications.

Please refer to table 16.

Table 16: Curved wall specifications

Panels thickness	Radius
60mm	> 2400mm
75mm	> 4000mm
100mm	> 4000mm

### Masonry and Concrete Wall EIFS EPS Panel Installation

Please contact RMAX.

### RMAX ORANGE BOARD® RENDER SYSTEM PRODUCT DESCRIPTION

Forming part of the RMAX Direct Fix EIFS Cladding board coating system, RMAX Orange Board® Dry Mix Render is a superior quality cement based, 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® render provides the ideal base for the subsequent application of a variety of top coats.



Photo 16. RMAX Orange Board® Render.

### Key Benefits

- Factory blended for dependable consistency and performance
- Superior adhesion to EPS base sheets
- 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 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 Batten Cavity 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 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® Render powder whilst stirring with a power mixer.



Photo 17. Preparation of Render Mix by addition of 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® Render consistency with a small amount of water and re-stir if necessary. Do not add water after setting has commenced.
- RMAX Orange Board® render will require approximately 3.5 - 4.0 litres of water per 20kg bag of RMAX Orange Board® Dry Mix Render for a correct mix ratio to be achieved.
- Allow RMAX Orange Board® Render to activate for around 3 to 5 minutes prior to application to the RMAX Direct Fix EIFS Cladding Panels.

### 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 3 - 5 mm base coat of RMAX Orange Board® render on to the RMAX Direct Fix EIFS Cladding Panel using a steel trowel with enough pressure to adhere the product.



Photo 18. Application of first render coat.

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



Photo 19. Application of Fibreglass Mesh over first render coat.

- Embed all fibreglass mesh / aluminium 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 render coat has sufficiently set, apply a second coat of RMAX Orange Board® Render at a thickness of 3-4mm 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® Render and embedded fibreglass mesh should bring the total finished render thickness to between 8 - 10 mm. **(8mm is the minimum finished application thickness required).**



Photo 20. 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 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 21. Application of final render coat. Total render thickness should be between 8mm and 10mm.

## INSTALLATION GUIDELINES

- RMAX Orange Board® 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.**

### 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 22. Application of primer coat onto finished rendered surface using a brush roller.**

### Pot Life

RMAX Orange Board® 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® Render should not be allowed to dry on tools. **Always clean tools with clean water immediately following use.**

**Table 17: RMAX Orange Board® 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 <sup>3</sup>
Particle Size	<2 mm
Flammability	Not applicable
Curing Time	Top coat after 4 days. Full cure in 28 days.

### Curing

Whilst the initial set of RMAX Orange Board® 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® Render is supplied in 20 kg plastic multi-lined paper sacks. RMAX Orange Board® Render can also be supplied in pallet lots.

### Shelf Life

RMAX Orange Board® 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® RENDER

The RMAX Orange Board® 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® Render Material Safety Data Sheet before use (available at [www.rmax.com.au](http://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. 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.

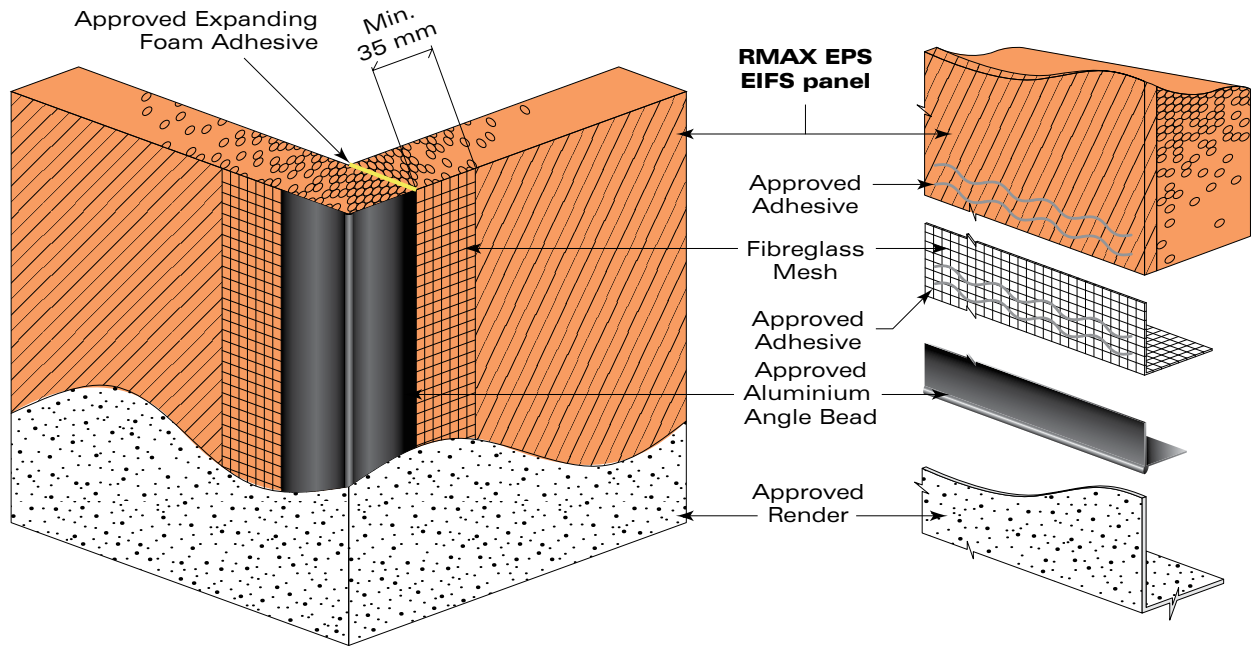
## General Health and Safety Procedures Think Safe. Act Safe.

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

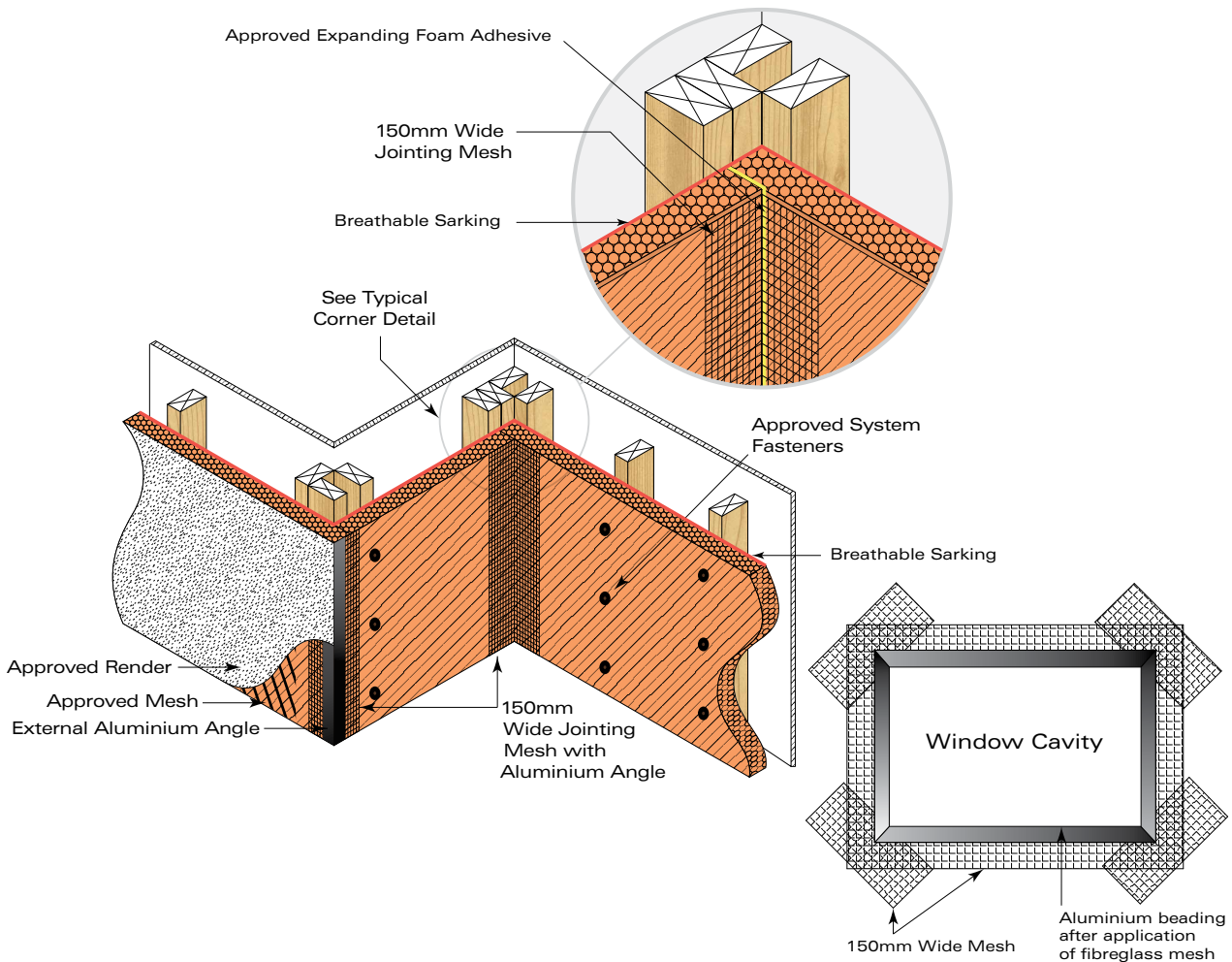
- Ensure the workplace is safe. This includes attention to plant and equipment.
- Insist that safe work methods are always practiced.
- Provide supervision and training where appropriate.
- Ensure everyone on site understands and accepts their responsibilities to promote a work place that is safe.
- Ensure that all health and safety requirements are adhered to. Consult your authorised Workplace Health and Safety Officer for specific advice if unsure.

**NOTE: DRAWINGS THROUGHOUT NOT TO SCALE**

**PRE-RENDER PREPARATION**



**Typical Corner Detail**

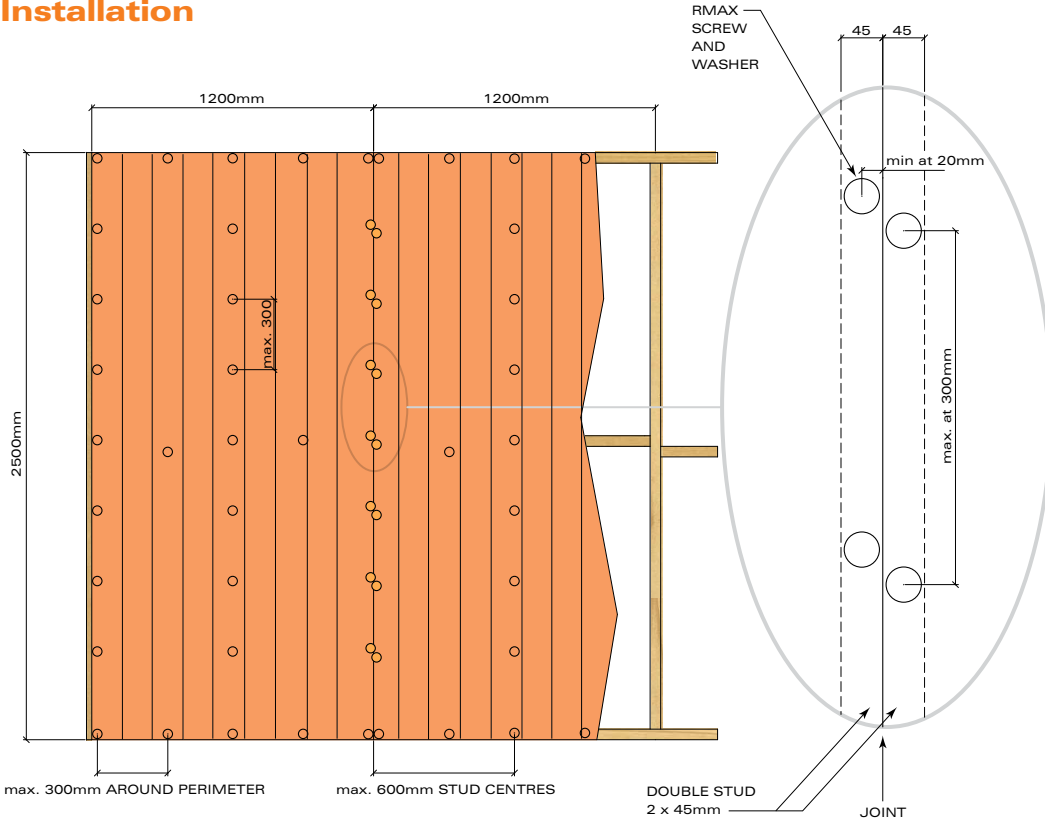


**Typical Internal And External Corner Detail**

**Window Application Detail**

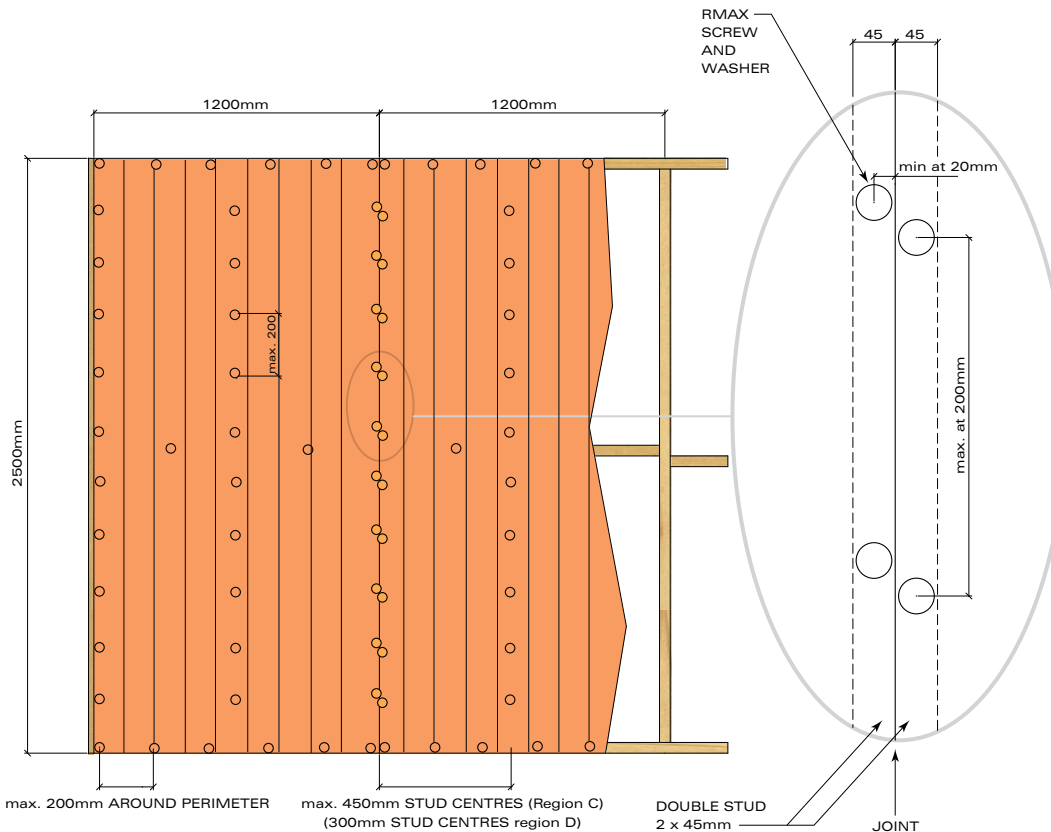
## INSTALLATION AND FIXING DETAILS

### In Non Cyclonic Regions (A and B) - Vertical Orientation Board Installation



## INSTALLATION AND FIXING DETAILS

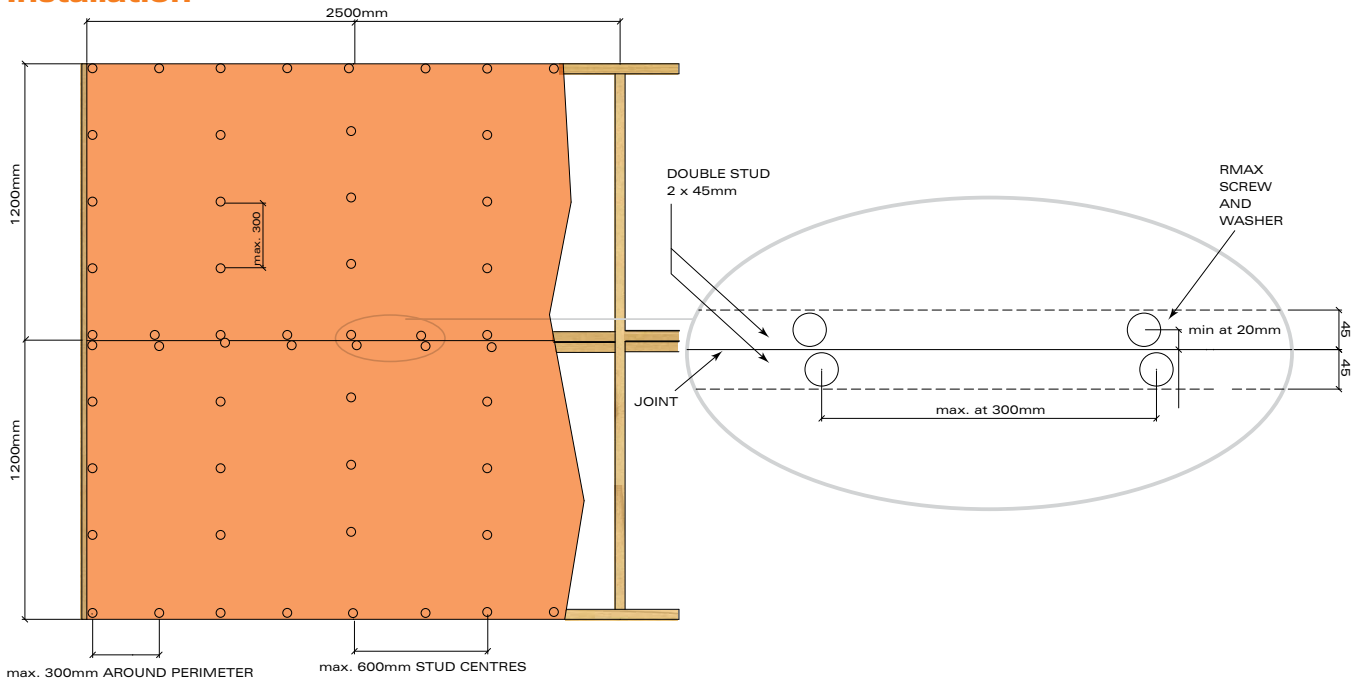
### In Cyclonic Regions (C and D) - Vertical Orientation Board Installation



Please refer to page 8 Table 2 Minimum stud and fastener spacing for both cyclonic and non cyclonic areas.

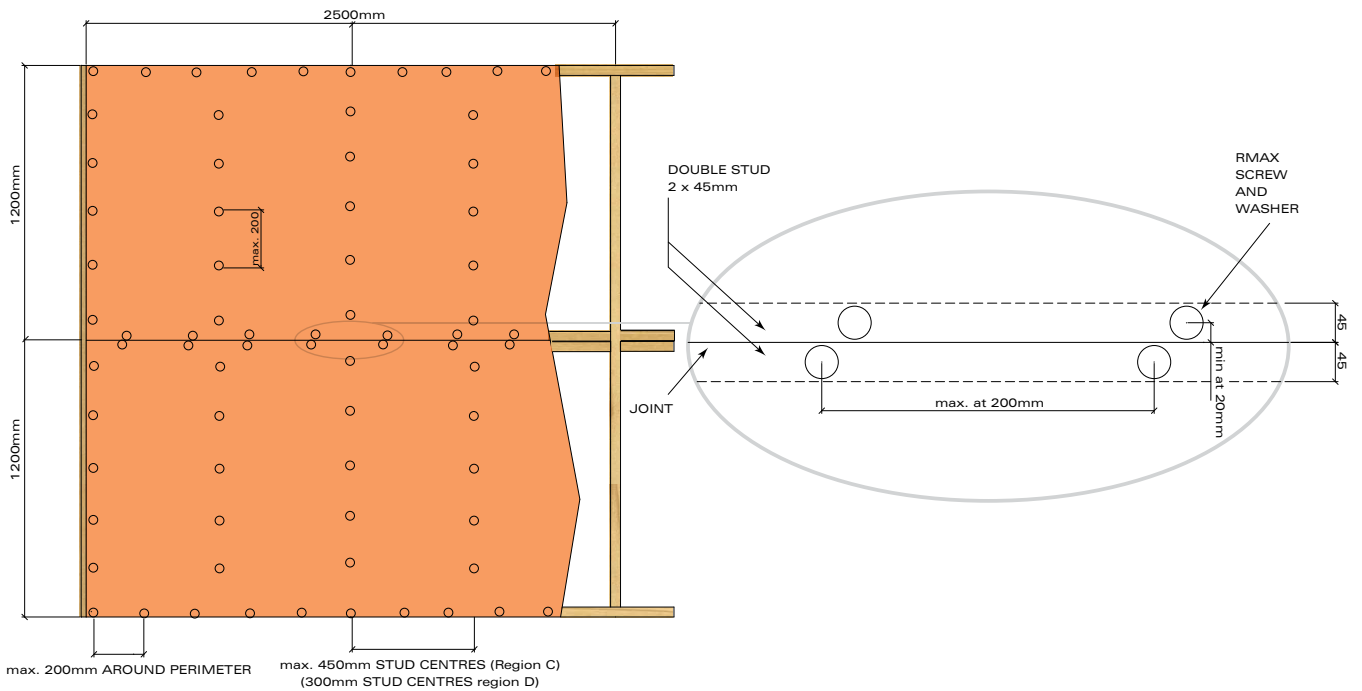
## INSTALLATION AND FIXING DETAILS

### In Non Cyclonic Regions (A and B) - Horizontal Orientation Board Installation



## INSTALLATION AND FIXING DETAILS

### In Cyclonic Regions (C and D) - Horizontal Orientation Board Installation

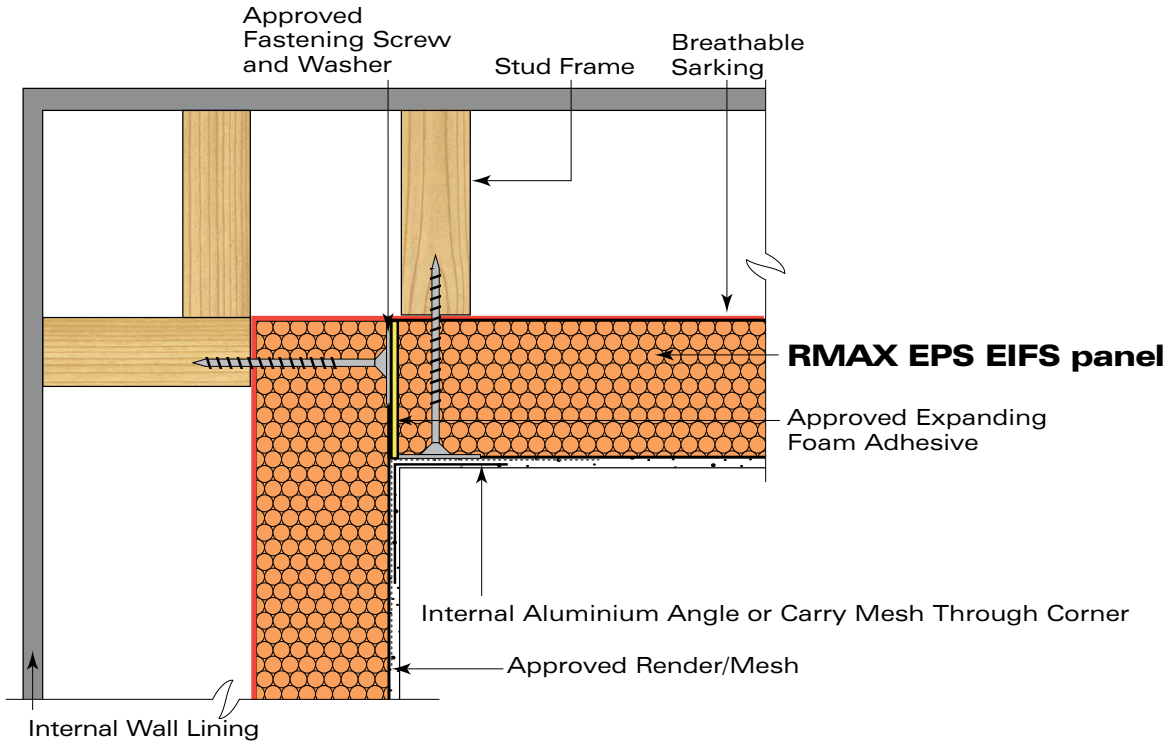


Please refer to page 8 Table 2 Minimum stud and fastener spacing for both cyclonic and non cyclonic areas.

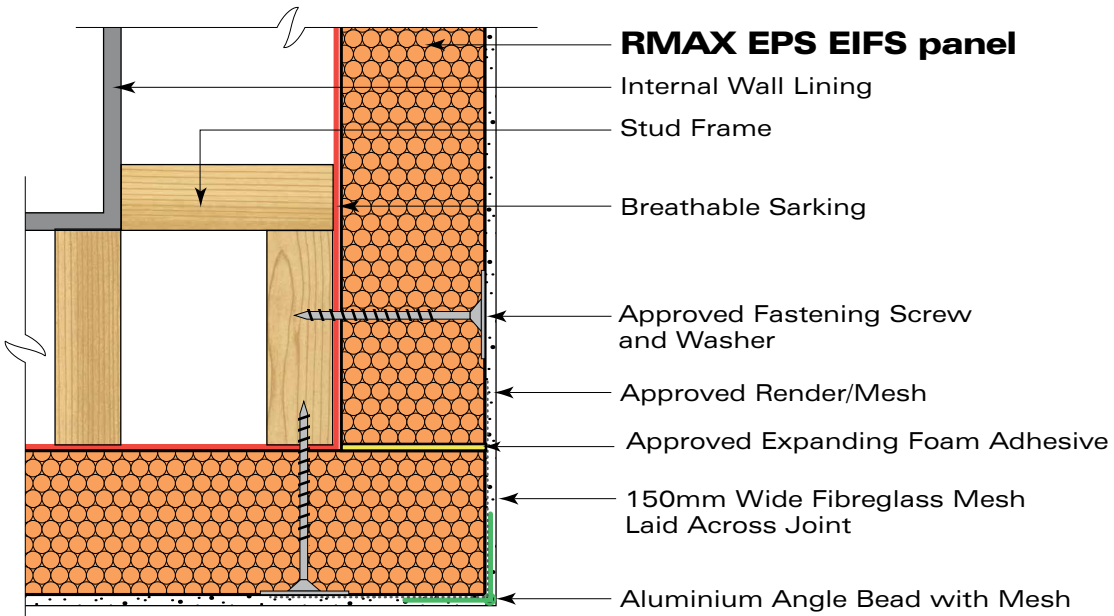


## INSTALLATION AND FIXING DETAILS

### Corner Details

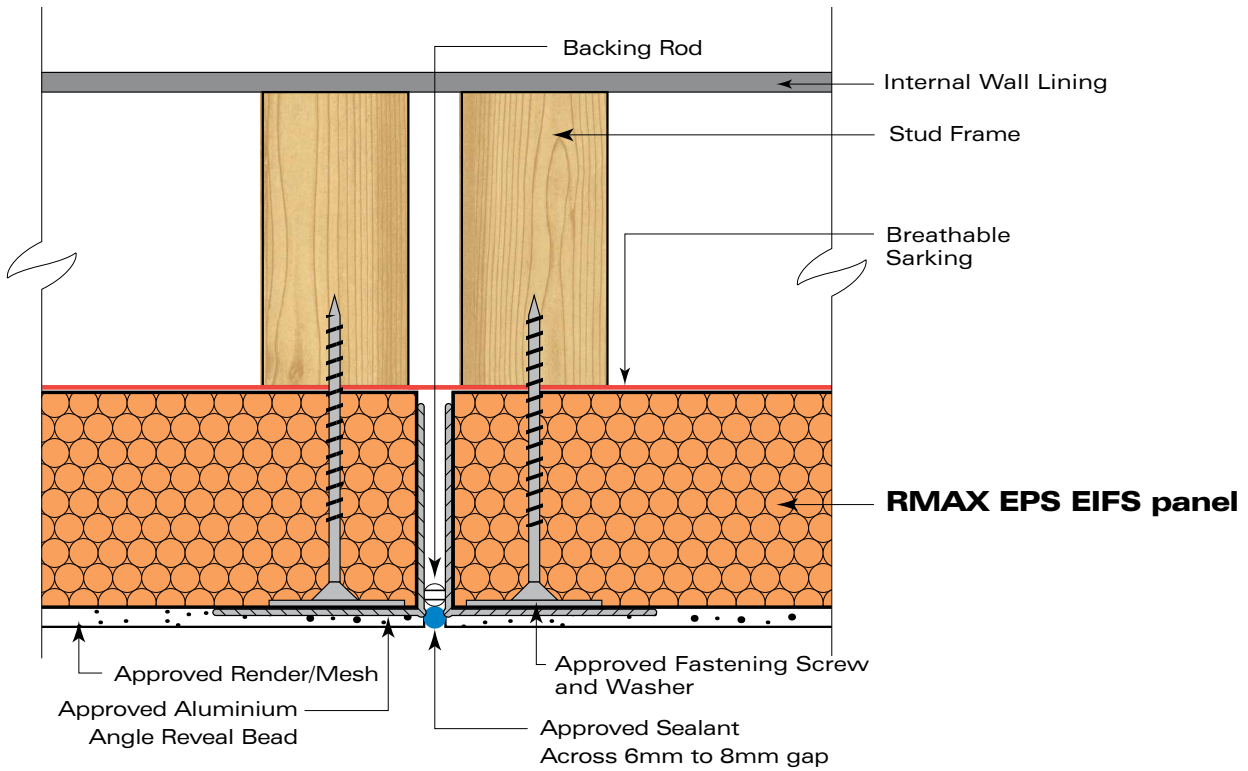


### Internal Corner Detail

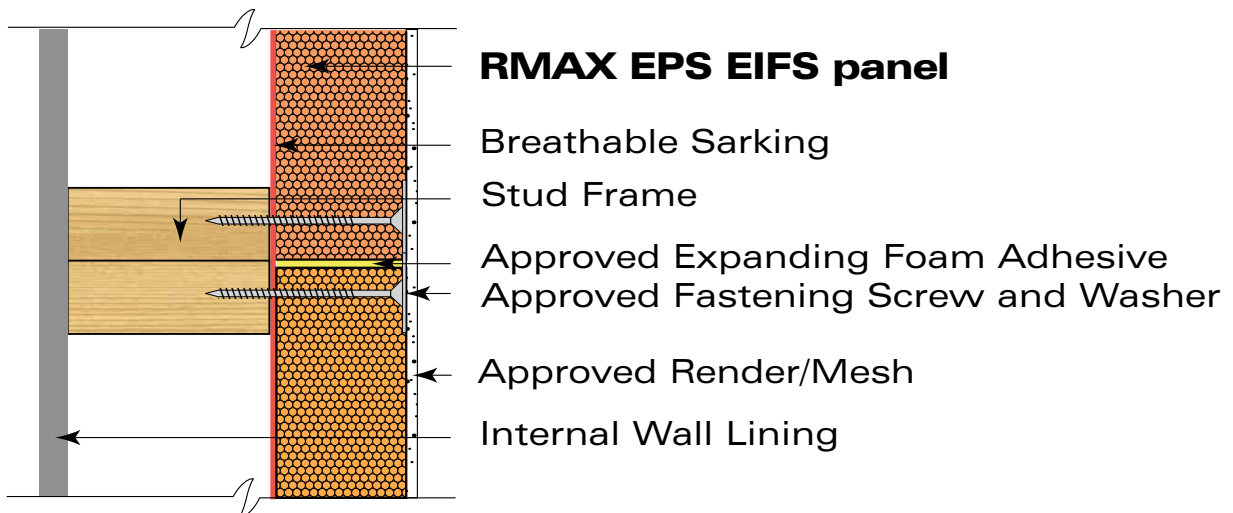


### External Corner Detail

## INSTALLATION AND FIXING DETAILS

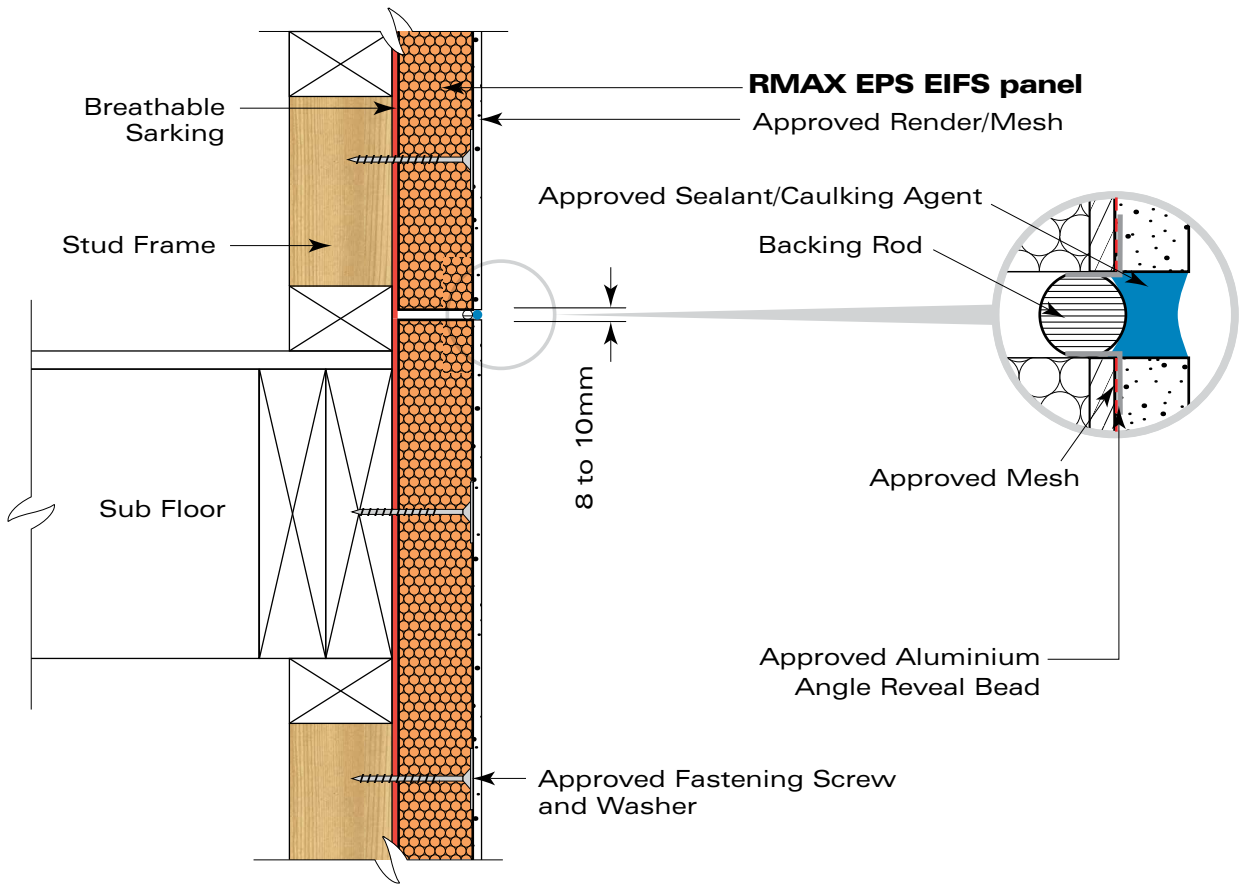


## Expansion (Control) Joint Detail



## Panel Join Detail

## 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.

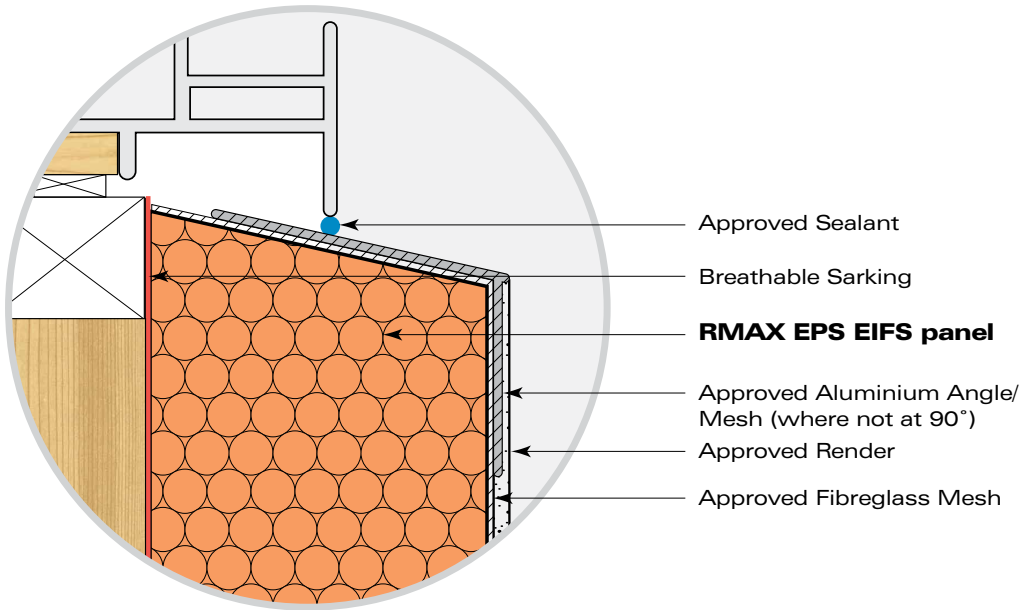
**Placement Guide: The following is a guide only and does not negate the user's responsibility to consult a Design Engineer.**

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.

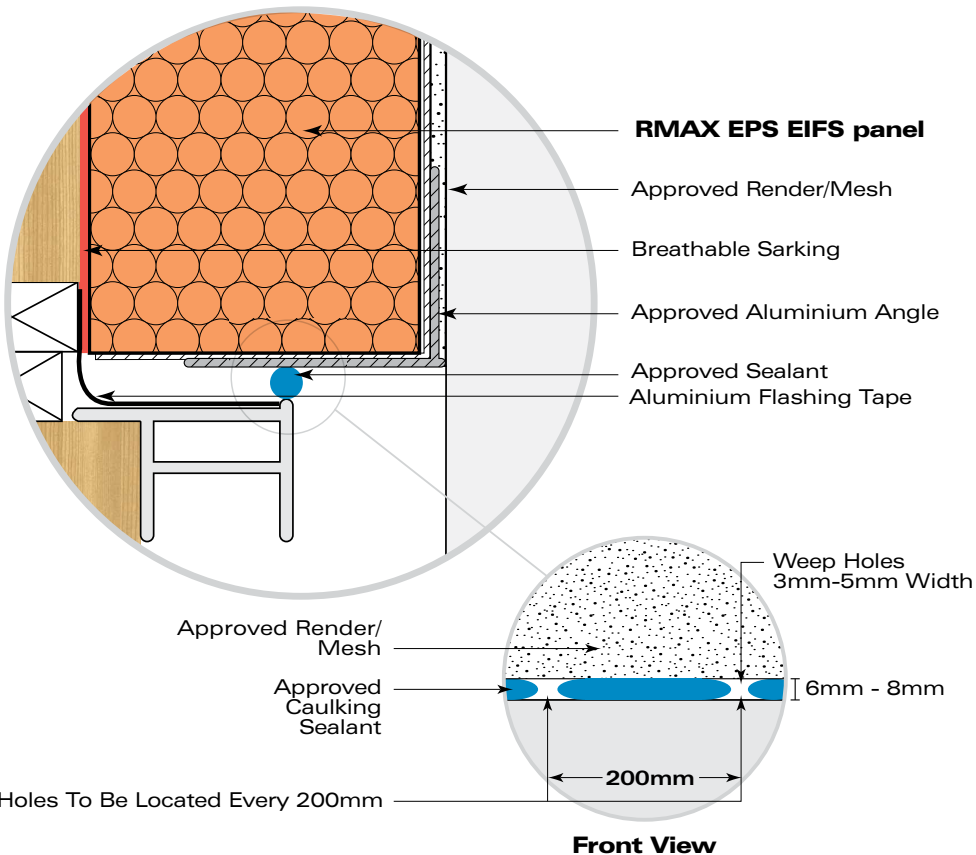
Spacing of horizontal expansion joints should not exceed 3 metres.

**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

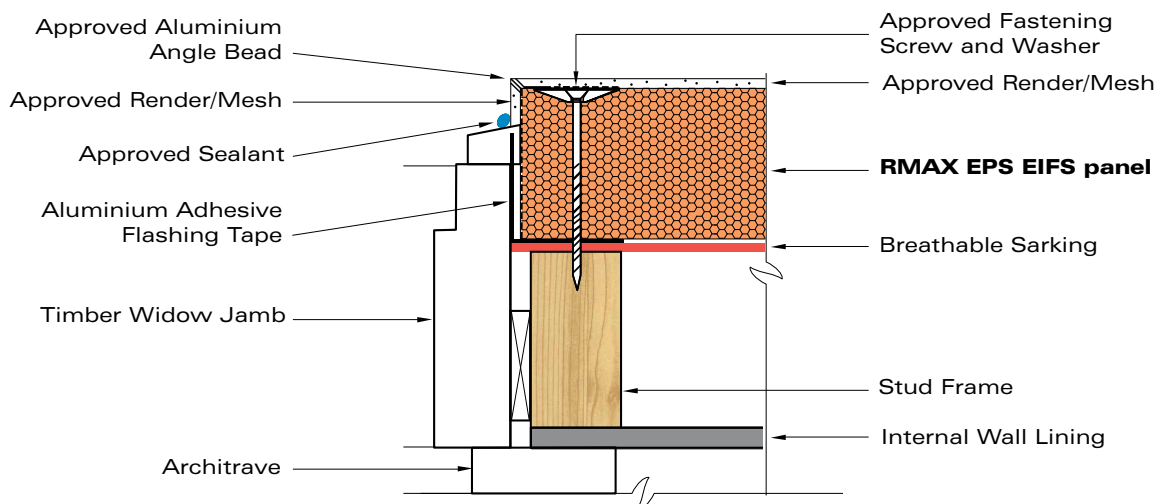
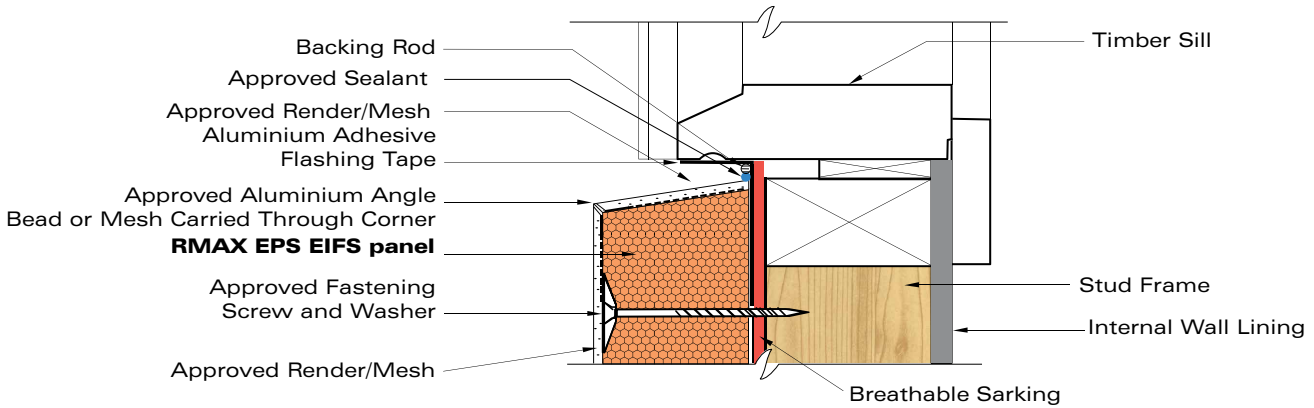
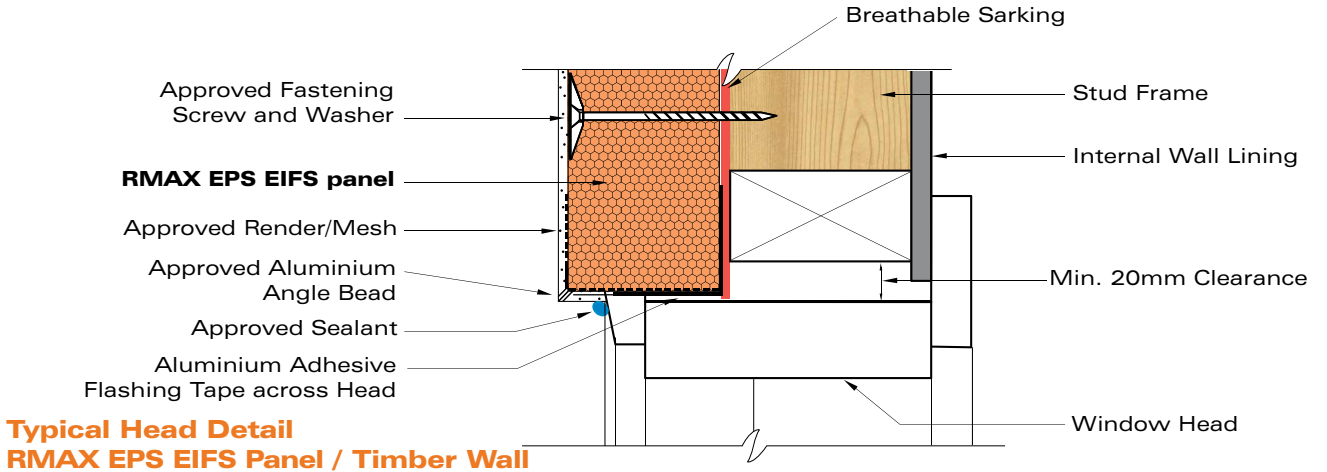


### Window Sill Detail



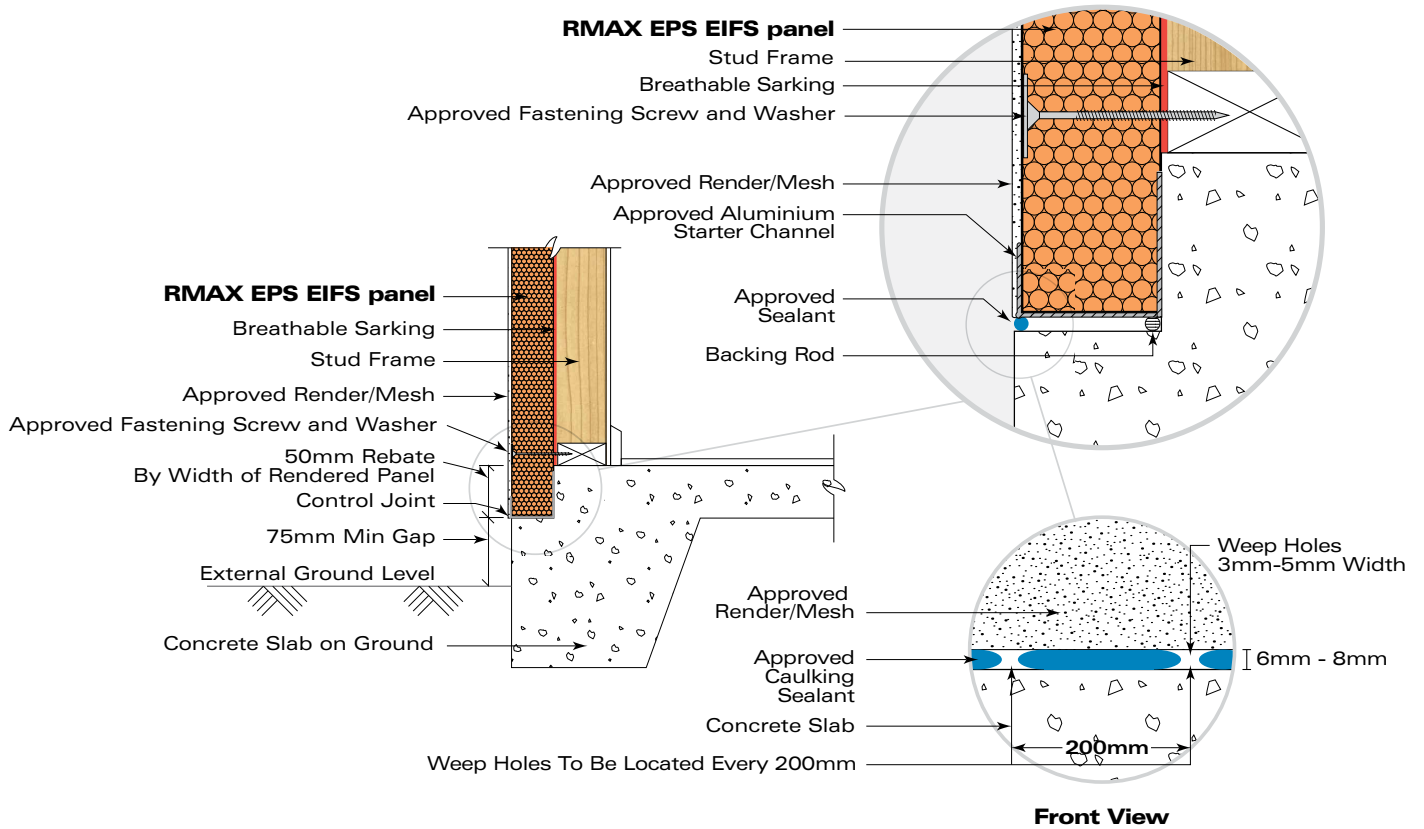
### Head/Jamb Detail

## INSTALLATION AND FIXING DETAILS

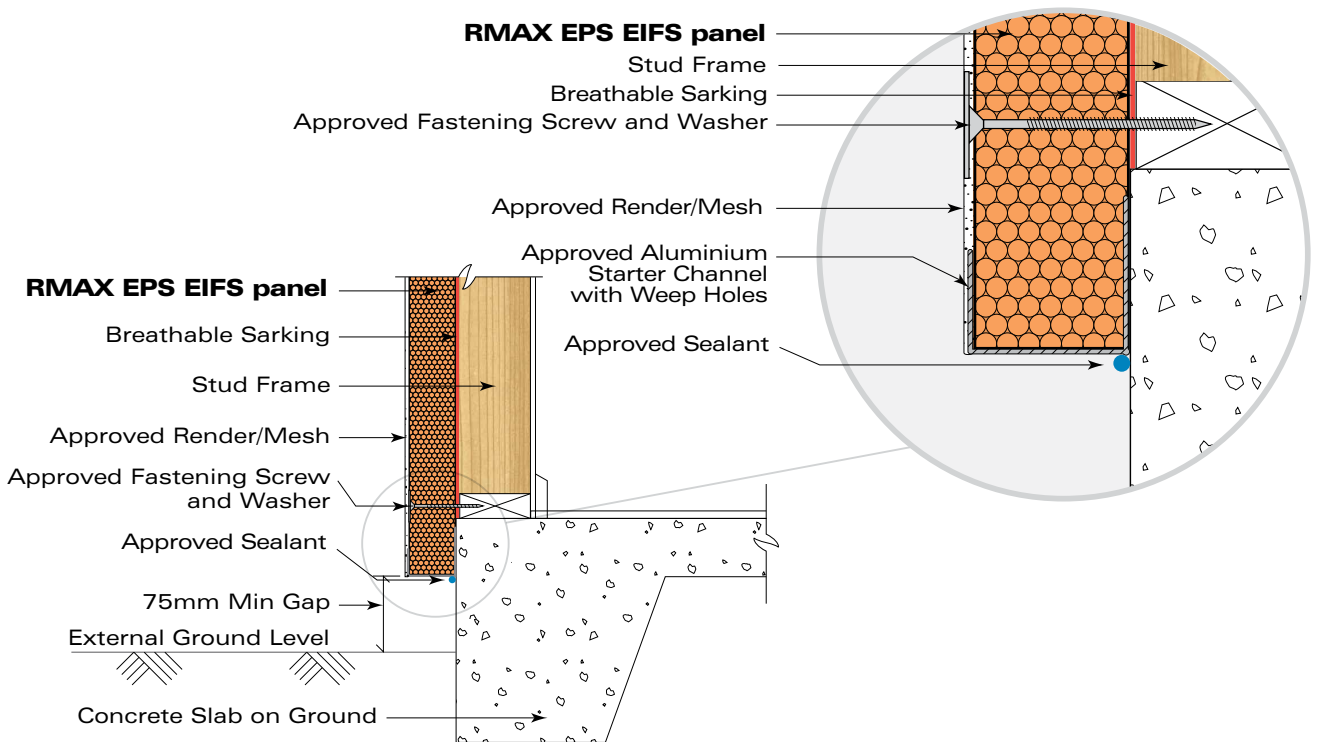


**Typical Side Jamb Detail  
RMAX EPS EIFS Panel / Timber Wall**

## INSTALLATION AND FIXING DETAILS



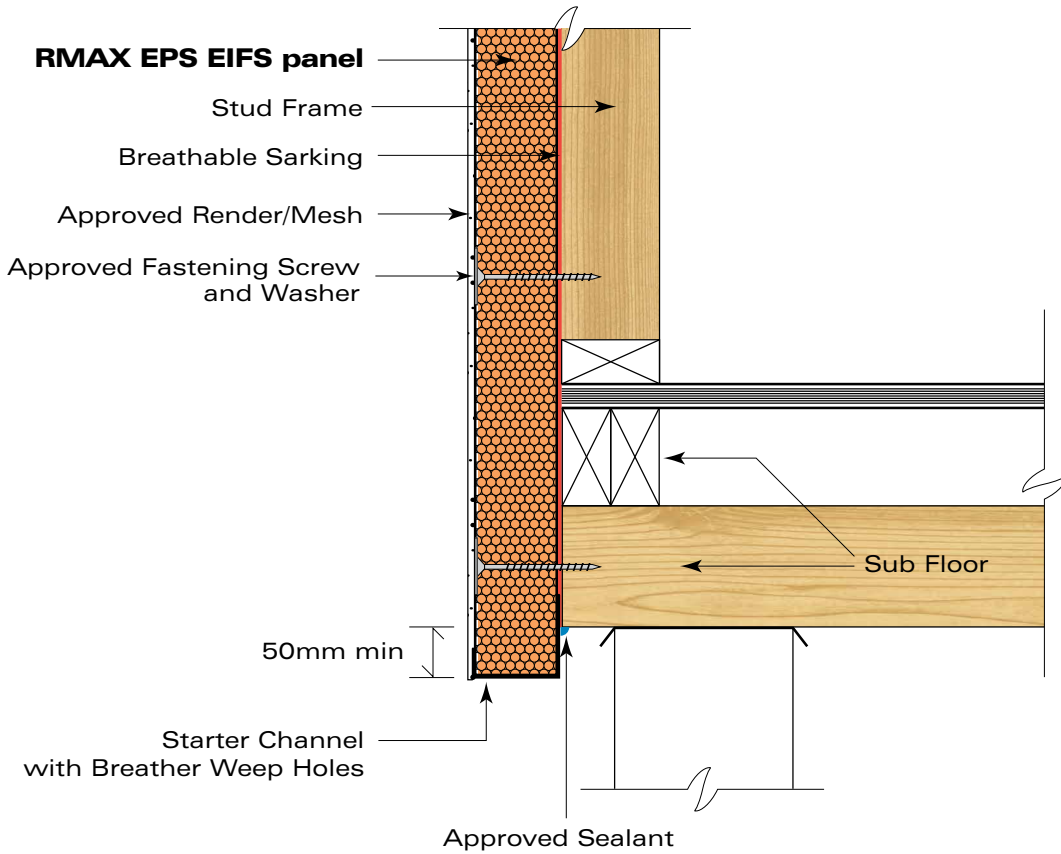
### Ground Slab Rebate Detail



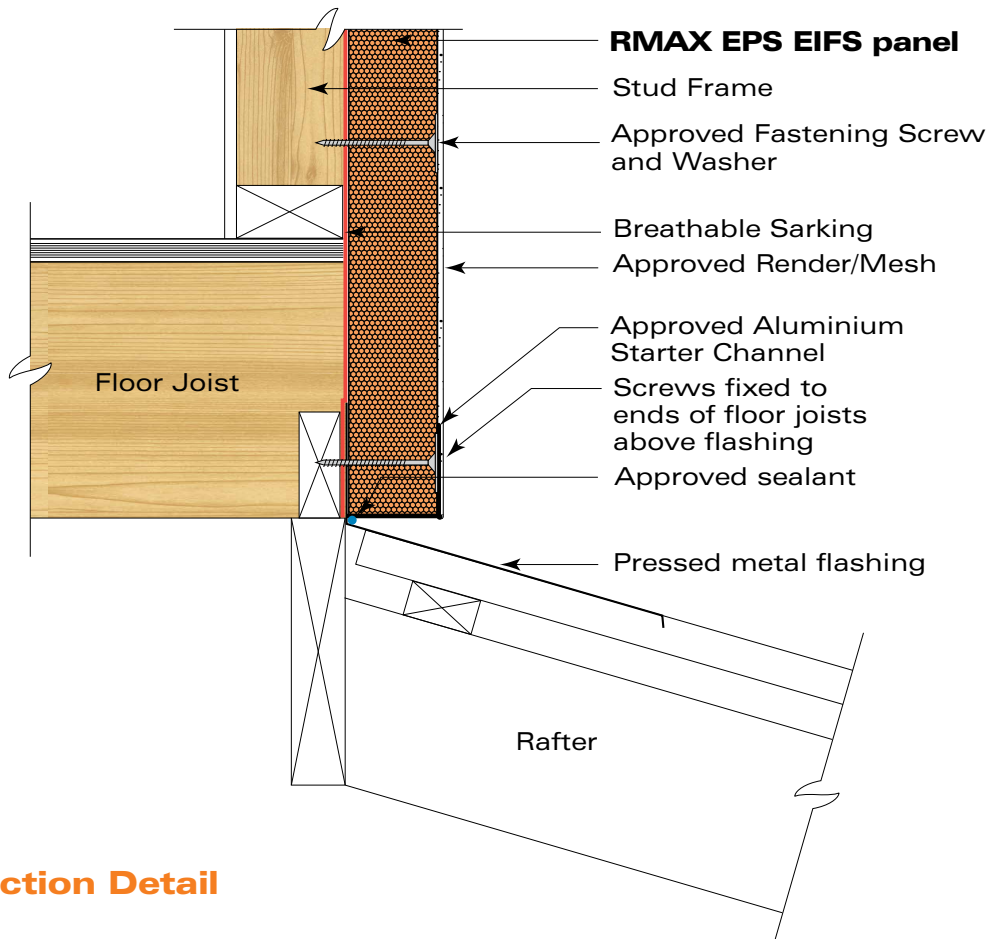
### Ground Slab Edge Detail

**NOTE:** The RMAX EIFS Ground slab edge detail construction is not covered by the Exova BAL 29 certification.

## INSTALLATION AND FIXING DETAILS

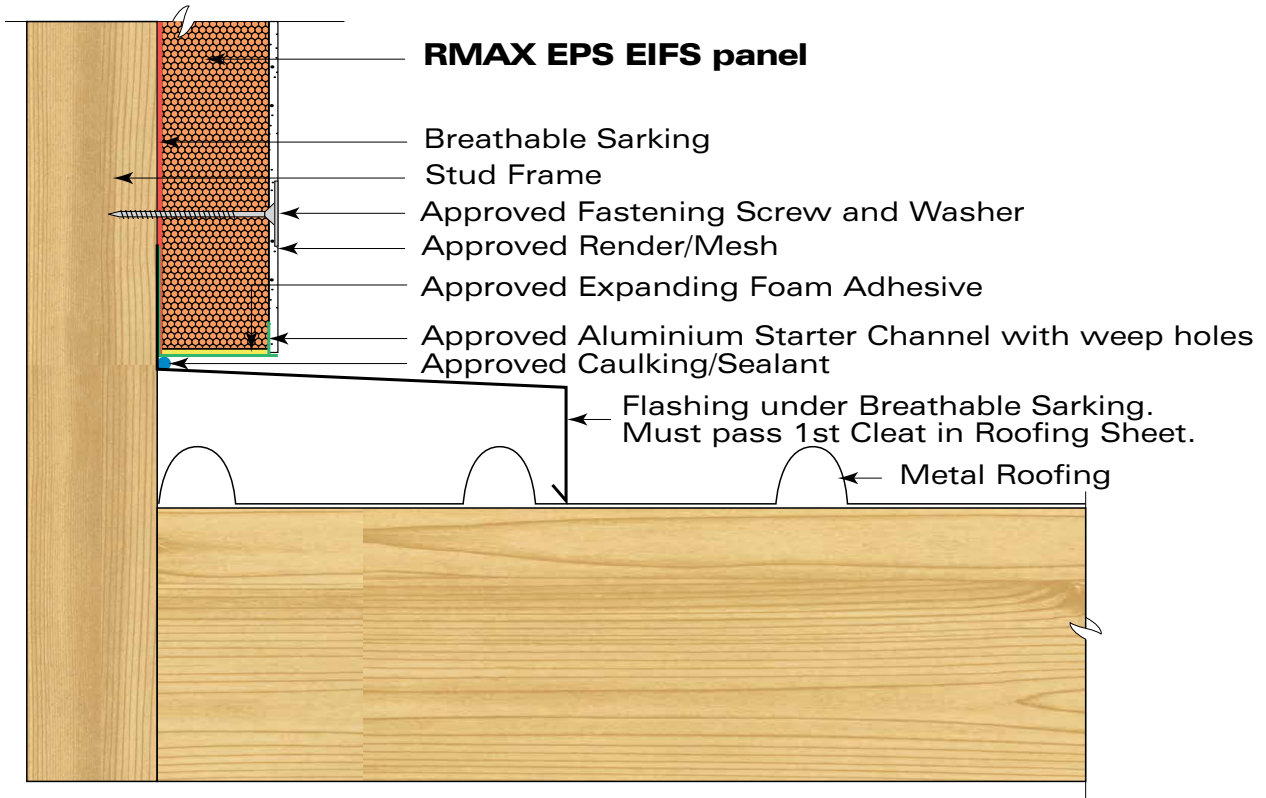


## Timber Floor Junction Detail

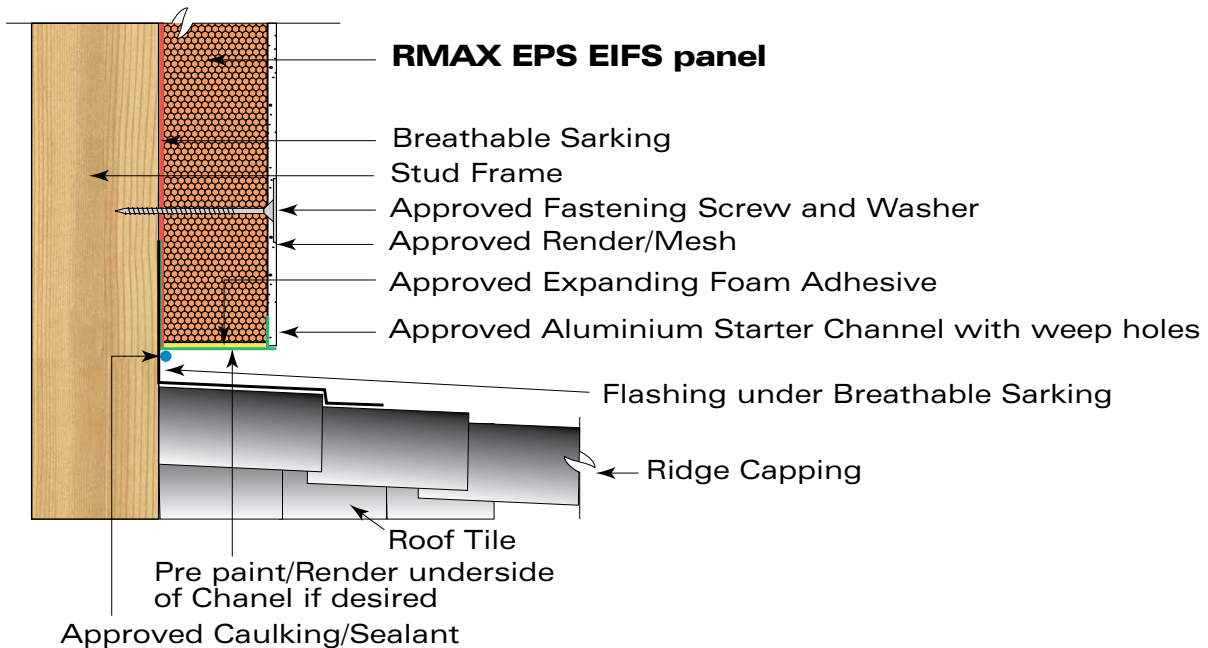


## Roof Junction Detail

## INSTALLATION AND FIXING DETAILS



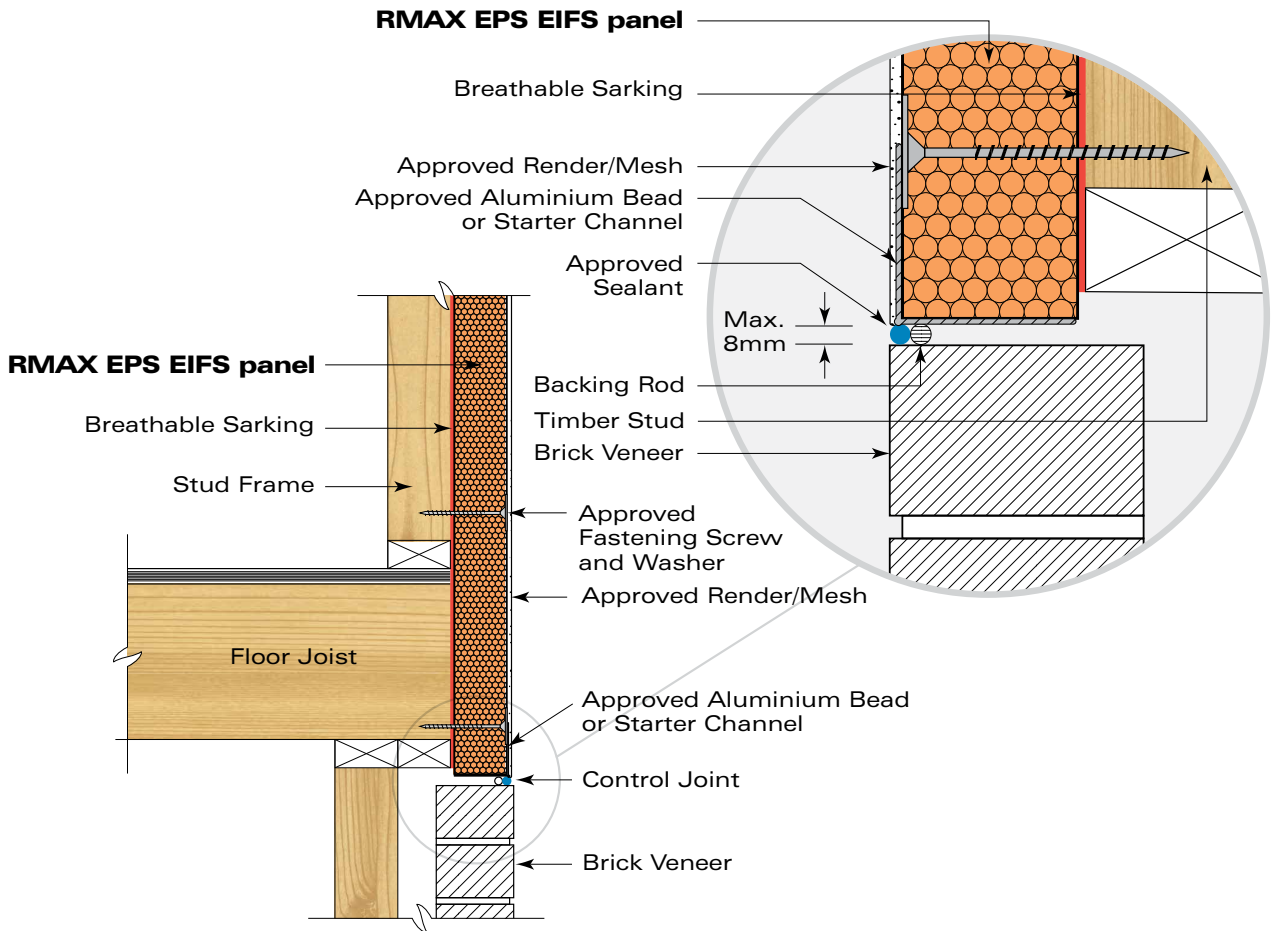
### Over Flat Roof Detail - Cavity Inside Starter Channel



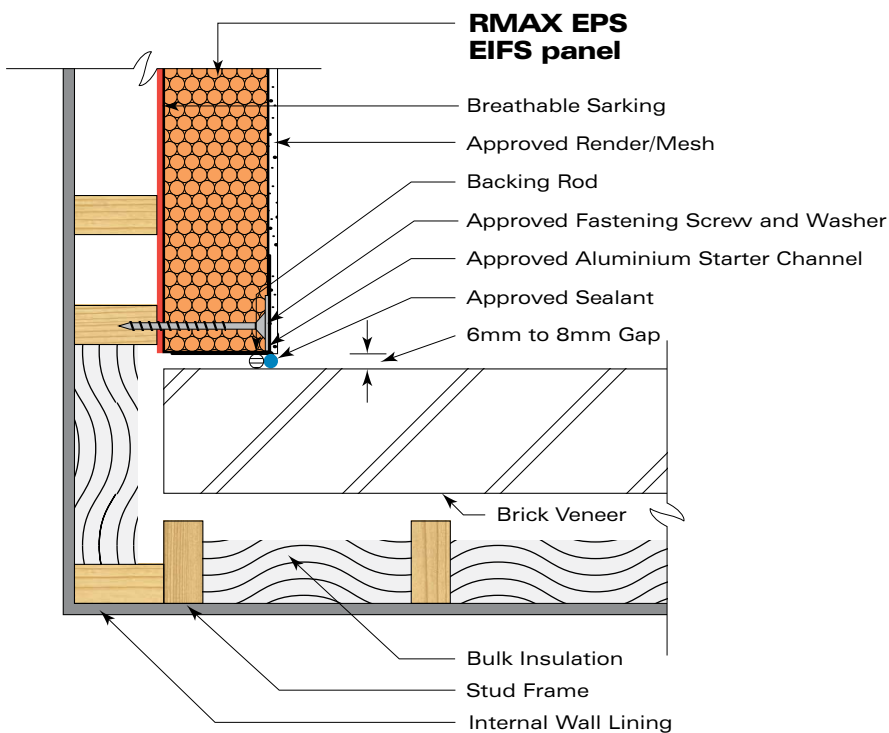
### Over Roof Detail - Ridge Capping



## INSTALLATION AND FIXING DETAILS

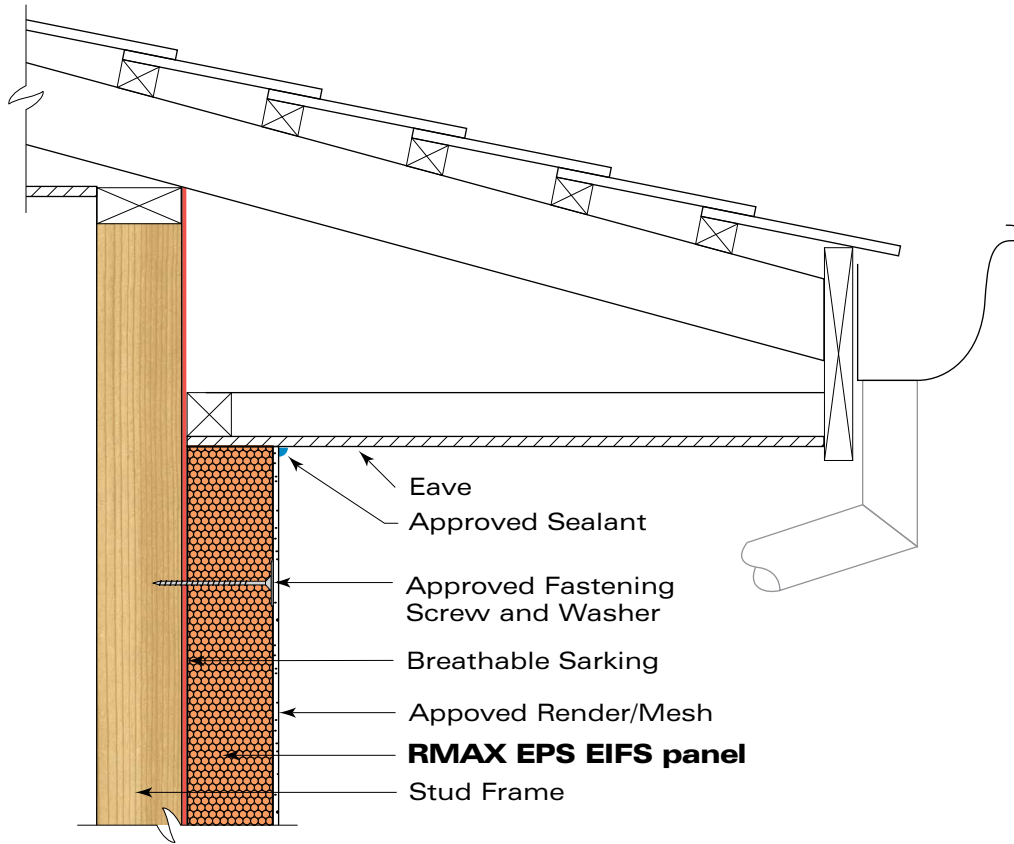


### Brick Veneer Junction Detail

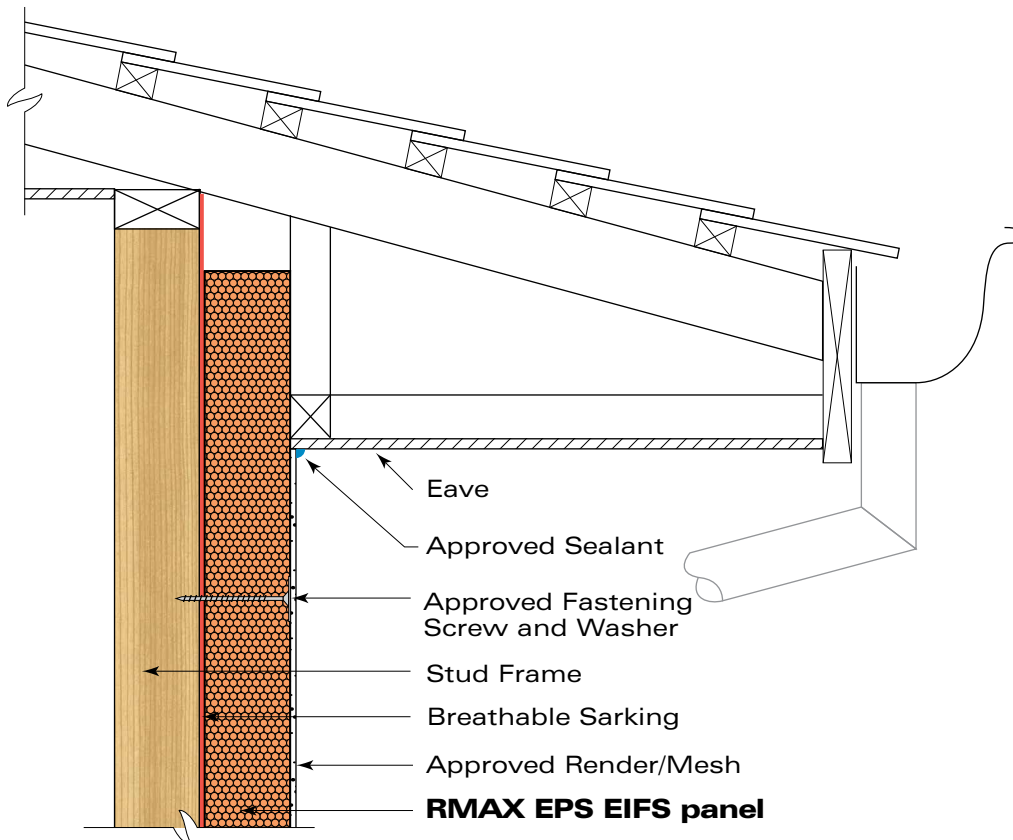


### Cladding to Brick Detail - Internal Corner

## INSTALLATION AND FIXING DETAILS

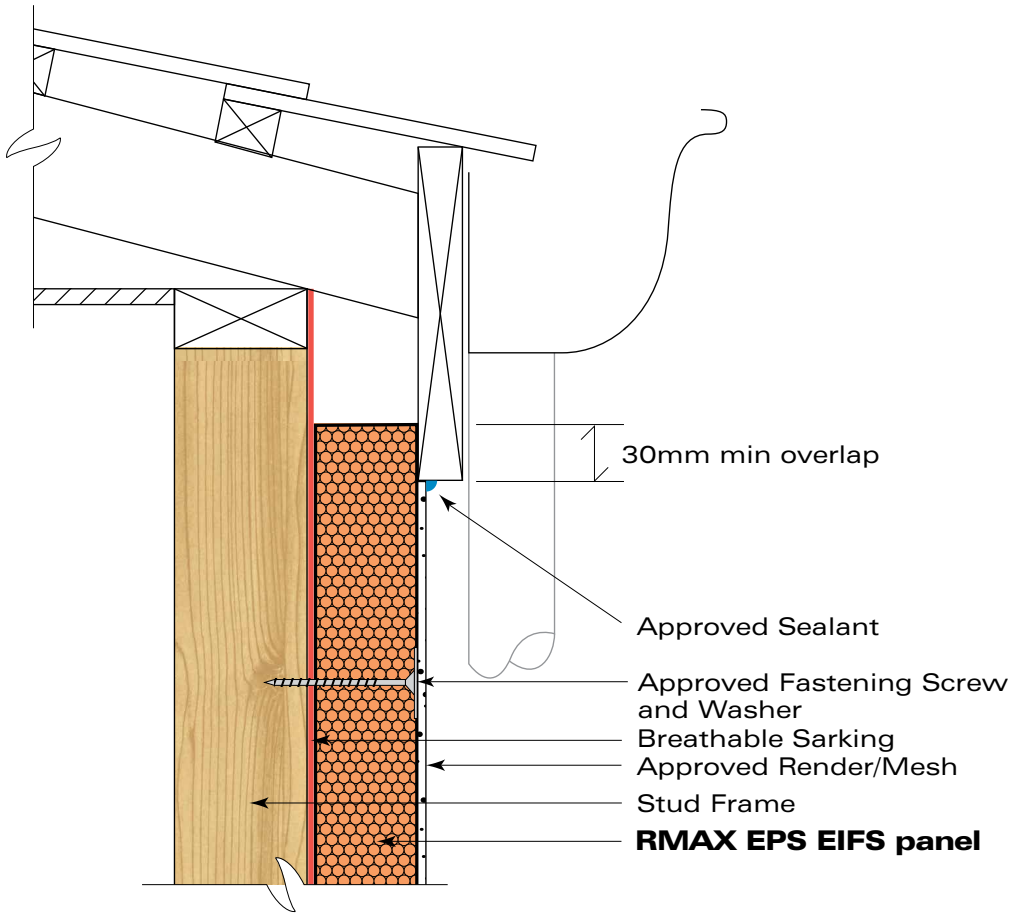


### Eave Detail - Type 1

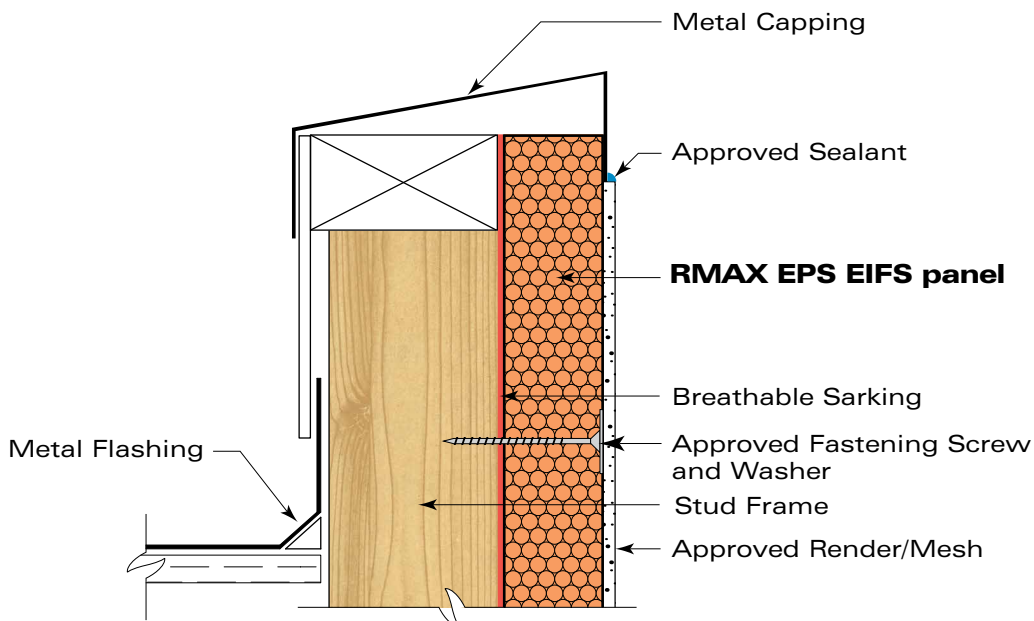


### Eave Detail - Type 2

## INSTALLATION AND FIXING DETAILS

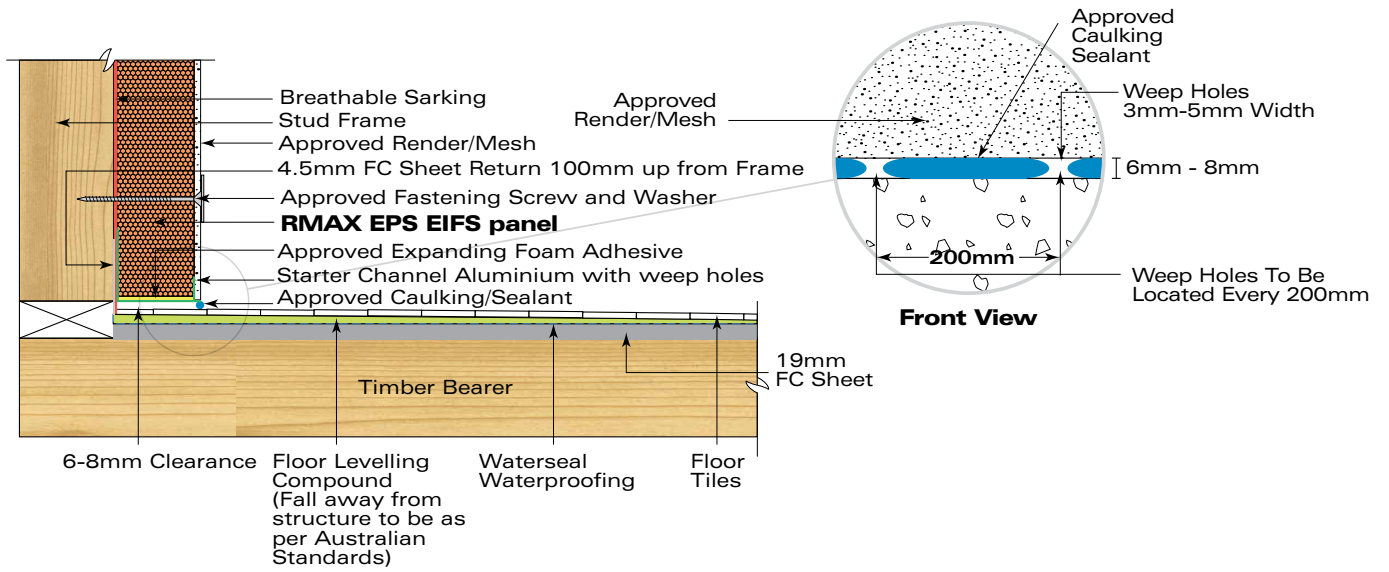


### Flush Eave Detail



### Parapet Detail

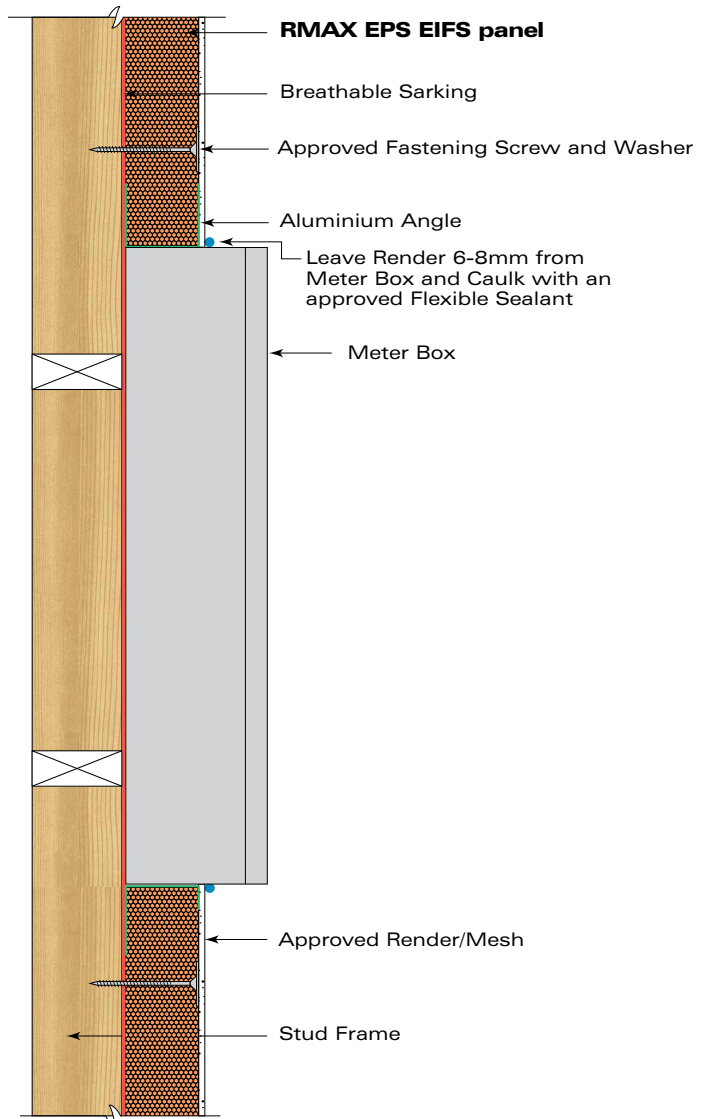
## INSTALLATION AND FIXING DETAILS



**Footnote**

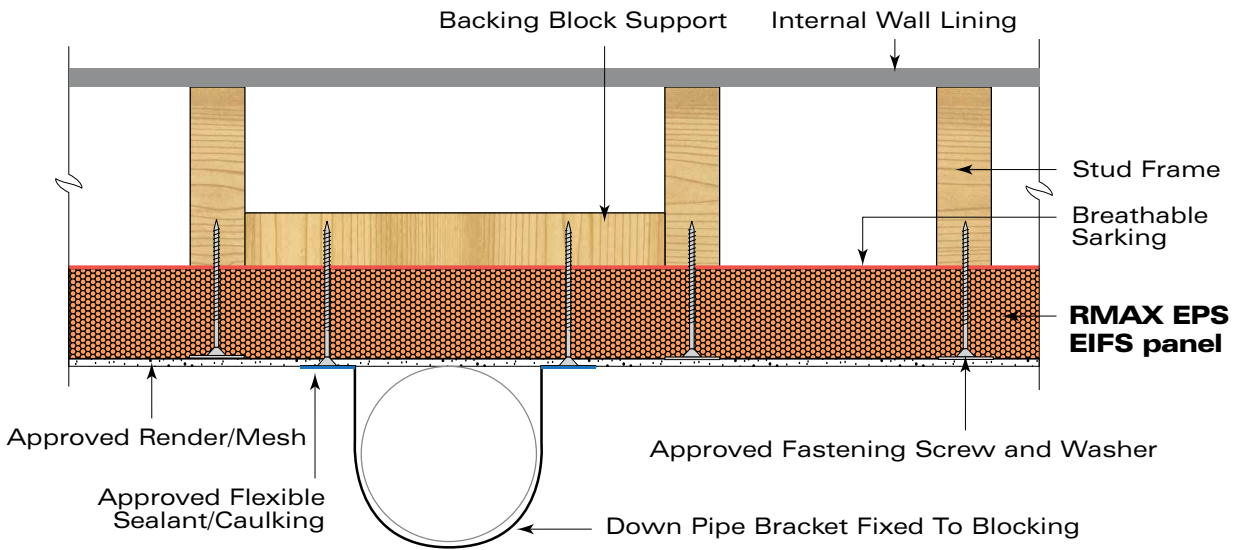
- Tiles need to run through to base plate of horizontal wall.
- Panel (Vertical) needs to be lifted 6-8mm above tiles and caulked (inclusive of weep holes) as per Australian Standards.

## Balcony Floor With Cavity Detail

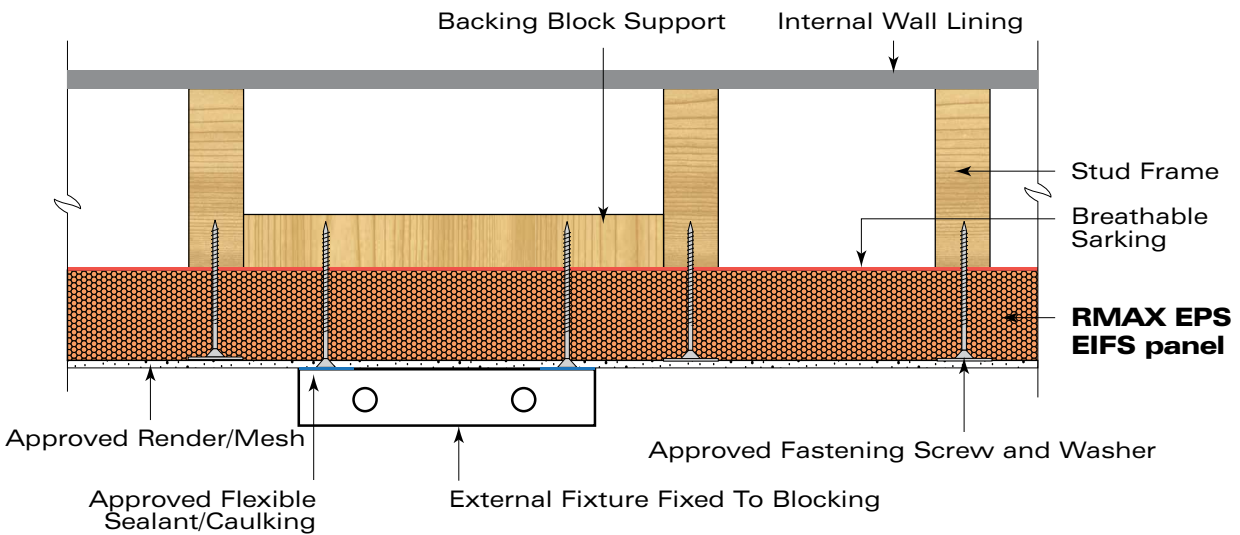


## Meter Box Penetration Detail

## INSTALLATION AND FIXING DETAILS



### Down Pipe Fixture Detail



### External Penetration Fixture Detail

## 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. To make a warranty claim the customer must provide the following:
  - (a) The details of the items purchased (application dates, product batch numbers 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.
4. The above information can be provided by:
  - (i) Mail: RMAX Sales, 2-4 Mephan St, Maribyrnong, VIC 2032;
  - (ii) Email: sales@rmax.com.au; or
  - (iii) Fax: 03 9317 7888;
5. Unless otherwise agreed to in writing by RMAX, the Buyer shall bear the expense of claiming the warranty.
6. RMAX provides no warranty, expressed or implied, against damage due to movement of the substrate or structure.
7. 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.
8. 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.
9. 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.
10. 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.

## REFERENCED DOCUMENTS AND INFORMATION

### Referenced Documents / Images

1. BRANZ Thermal Resistance testing of RMAX Isolite® EPS Insulation samples. BRANZ Limited, Moonshine Road Judgeford, Rotorua, New Zealand.  
Test report Number: D10371/ DUO1.  
Report issue date: 30/8/2013.
2. BRANZ Thermal Resistance testing of RMAX ThermaSilver® EPS Insulation samples. BRANZ Limited, Moonshine Road Judgeford, Rotorua, New Zealand.  
Test report Number: D10371/ DUO2.  
Report issue date: 30/8/2013.
3. AWTA AS/NZS 1530.3 - 1999 Testing: Simultaneous determination of Ignitability, Flame Propagation, Heat Release and Smoke Release for Rendered RMAX ThermaSilver® with Perform Guard® panel. Australian Wool Testing Authority Ltd, Flemington, Victoria, Australia.  
Test Number : 7-593183-CV.  
Test Report Issue Date : 27/08/2013.
4. Exova Warringtonfire BAL 29 test certificate and BAL 29 test report for RMAX EIFS Batten Cavity product range.  
Exova Warringtonfire Aus Pty Ltd Melbourne.  
Report Issue Date: 29/5/2013.
5. SKIP Consulting Pty Ltd ThermaSilver® Cladding range Product Accreditation Appraisal Report. Report No: SKC10-154-BRAC-ThermaSilver-Rev 3. Report issue Date 11/5/2012.
6. RMIT University Melbourne Applied Acoustics Laboratory.  
RMAX ThermaSilver® (Neopor®). Sound Transmission Loss Test Report to AS 1191 - 2002 for Full Wall System and Iterations.  
Report issue Date 18/4/2012.
7. Vipac ThermaSilver® EPS Structural Appraisal Report.  
Vipac Engineers and Scientists Ltd.  
Report Issue Date: 27/2/2012.
8. AWTA Method of testing Rigid Cellular Plastics (ThermaSilver®). Determination of Compressive Stress to AS 2498.3 - 1993. Determination of Cross Breaking Strength to AS 2498.4 - 1993.  
Australian Wool Testing Authority Ltd, Flemington, Victoria, Australia.  
Report Issue Date: 19/12/2011.
9. Thermawall® - Wall Cladding Cyclonic Region Performance Test Report. 300mm Stud Spacing, 200mm Fastener Spacing.  
Vipac Engineers and Scientists Ltd Melbourne, Victoria, Australia.  
Report Issue Date: 3/8/2011.
10. Thermawall® 75mm Thick Panel Structural Performance Test Report.  
Vipac Engineers and Scientists Ltd Melbourne, Victoria, Australia.  
Report Issue Date: 15/3/2011.
11. Thermawall® - Water Penetration Test Report. Vipac Engineers and Scientists Ltd Melbourne, Victoria, Australia.  
Report Issue Date: 22/12/2010.
12. "EXIN wall panels: racking capacity of Ecotex wall panels"  
Arup Facade Engineering.  
Report Issue Date: 24/10/2001.
13. Figure 1, page 8: Australian map wind region information. Graphic and Information derived from the following web page:  
[https://www.dlsweb.rmit.edu.au/toolbox/buildright/content/bcgbc4010a/08\\_bca\\_requirements/02\\_high\\_wind/page\\_001.htm](https://www.dlsweb.rmit.edu.au/toolbox/buildright/content/bcgbc4010a/08_bca_requirements/02_high_wind/page_001.htm)

### Disclaimer

The information contained in this manual is presented as a guide to users of RMAX Direct Fix 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 Direct Fix EIFS Cladding range of products, misuse, wilful damage, neglect, accidental damage, or any modifications or alterations to any of the range of RMAX Direct Fix EIFS Cladding products.



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. In the Australian building industry, RMAX was the first to introduce termite resistant expanded polystyrene (EPS) – Isolite® Perform Guard® EPS. The exclusive patented technology incorporates a safe, non-toxic inorganic additive that is a deterrent to termites.

Other new and innovative products from RMAX are ThermaSlab® and ThermaProof®. For details on these and other products in our range, visit [www.rmax.com.au](http://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.



All Greenhouse Gas emissions associated with printing this product have been offset.

This product is 100% Carbon Neutral

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.



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

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Enriching lives through innovation

