*Thermal light weight insulation cladding system*

# rendaPANEL™

Focal Point Architectural Mouldings

## System Information

Cladding for a new Millennium

FOCAL-POINT
Architectural Mouldings

# INTRODUCTION

## Monolithic Light Weight Cement Render Cladding

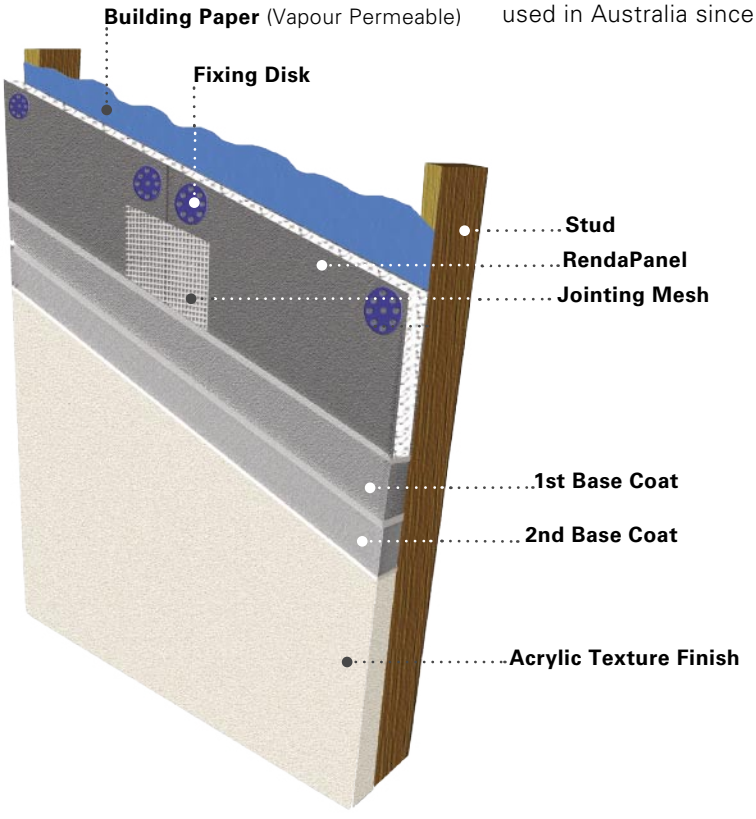
RendaPanel is multi-layer, lightweight composite 'masonry' building panel. Designed to be used in both commercial and residential applications, this versatile building panel is readily installed to timber or metal framework with conventional fixings.

RendaPanel is finished with a multi layer 6-8 mm reinforced cement render and textured surface.

The completed walling system produces seamless 'rendered' monolithic façade with outstanding durability and attractiveness compared to other 'thinskin' lightweight cladding based on Fibre Cement Sheeting (FCS).

The truly outstanding features of RendaPanel is its inherent flexibility and insulating properties that reduced thermal structural movement that so often results in joint shadowing - so prevalent in FC Sheet Claddings. The propriety installation system and thermal resistance of RendaPanel (R1.1) achieves a highly efficient 'continuous' insulating layer not possible with other 'thinskin' facade cladding system.

RendaPanel has it origins in Europe and North America where EIFS (Exterior Insulating and Finishing Systems) have been extensively utilised since the late 50's. Similar applications have been used in Australia since the early 80's.




## Key Benefits

Factory applied, ensures up most quality integrity with superior strength than traditional EIFS field applied systems.

On site costs are reduced as the board arrives in a pre-finished state avoiding time consuming, messy and labour intensive applications.

The EPS core is not only rigid and light weight but has its own thermal R-Value signature which by its nature promotes energy efficiency.

By utilising a unique system of mechanical fixings that incorporate both a screw and plastic plate which are embedded into the rendered fibreglass fabric, wind loading is dissipated and individual sheets do not move, thus avoiding jointing, cracking and blemishes of the sheets through the finish coat.

Any movement of the building substrate is taken up in the fixing layout of the Rendapanel sheets. Each sheet acts as a pivot distributing movement over the entire surface thus reducing the potential for cracking, bulging or surface blemishes associated with rigid claddings.

Footing and concrete slab sizes can be reduced due to the light weight frame construction.

Due to the single stud wall frame construction and the RendaPanel being applied to the outside the overall finished floor area is increased dramatically

# PROPERTIES

## Strength and Flexibility

The unique double-layered reinforced surface of RendaPanel achieves outstanding dimensional rigidity. However its cellular core remains sufficiently flexibility to accommodate thermal and minor frame and structural movement-reducing the likelihood of joint cracking.

## Alignment and Installation

RendaPanel is supplied in convenient to handle sheet sizes of
2400mm X 1200mm.
It is easy to cut with a building knife or masonry power saw. The lightweight nature of this building board provides increased installation productivity with simple alignment and fixing using broad faces screw fixings.

## Thermal Properties

RendaPanel gains its exceptional insulating properties from its rigid cellular polystyrene core that contains trapped stabilized air within its cell like structure.
Typically the 40mm thick standard M-Grade panel has an R- Value of 1.1. and the 75mm Panel has an R- Value of 2.1.

## Combustibility

When compared with the most common building materials such as timber, RendaPanel has a lower range of flammability. A not well-known fact is that rigid cellular polystyrene will not burn on itself and will not spread flame and RendaPanel also contains a fire retardant additive.
*The table below shows the test results when compared to other building materials.*

| Material | Ignitability Index (0-20) | Spread of Flame Index (0-20) | Heat Evolved Index (0-20) | Smoke Developed Index (0-20) |
|---|---|---|---|---|
| EPS RendaPanel | 12 | 0 | 3 | 5 |
| Australian Sort board | 16 | 9 | 7 | 3 |
| Oregod | 13 | 6 | 5 | 3 |
| Blue gum | 11 | 0 | 3 | 2 |

**Comparative testing of some materials to AS 1530,part 3 early fire hazard test*
*Source: Foamex EBS Notes on the Science of building.*

## Toxicity

Widespread research both by the CSIRO and from overseas indicates that the gases emitted from the burning of EPS are no more harmful than those of timber.

# APPLICATION

## Framework

RendaPanel sheets can be fixed to either timber of steel framing. All frames should comply with the relevant code and/or Australia Standard for the type of construction.

Studs should be positioned at a maximum of 600mm centers with noggins at maximum of 1350mm centers.

Frames must be straight and plumb, and be laterally restrained, via floor or roof framing.

## Fixings

Timber or Steel countersunk (class 3) self drilling screws are used in conjunction with the blue Focal Point mechanical disk fastener.

The assembled fixing is pushed through the panel until the stud is felt, making sure that the assembled screw is aligned directly in the middle of the stud.

## Installation

RendaPanel sheets are orientated horizontally and are fixed at 250mm centers on stud lines.
Focal Point mechanical disc fasteners are to be used at all times. Fixings should be started at 20 mm from the bottom of the first sheet at ground level. The sheets are arranged in a brick stretcher bond and are available in width size of 1200mm. Typically 5 fixings are used per stud line.

## Cutting

RendaPanel sheets are easily cut, either by hand or by power tool.
We recommend the use of a tracked electric circular saw, fitted with a masonry diamond blade. This also provides the cleanest cut and saves on both time and materials. Quick cuts can also be achieved with the use of a stanley knife, where a clean cut is not essential.

# APPLICATION

## Fixing

The assembled fixing is pushed through the Panel until the stud is felt, making sure that the screw is aligned directly in the middle of the stud.
Then drive into the frame until the plastic disk just penetrates the surface of the RendaPanel.
We recommend the use of battery operated, cordless drills.
Care should be taken to not overdrive the fixing, as this will strip the plastic disc and the fixing will be ineffective.

## Jointing

The joints in the sheets should be butt jointed together and glued with a suitable construction adhesive with no gap. Where gaps exist fill white expanding PU foam and flush level with surrounding surfaces.

## Control Joints

Control joints are placed at the points where specified but generally all windows and doors should have vertical control joints installed.

Either a 10mm vertical gap is cut or left and
1) a plastic V control joint bead is glued and clouted in position. After skim coat and texture bead is cut and filled with paintable mastic.
2) a foam backer rod is inserted and after skim coat and texture filled with paintable mastic.

## Corner Detail

Corners are butt joined and glued together with a construction adhesive.

## Window Details

The panel is fixed to the window head and sill as per section details. Stainless steel corner beads are fixed on all reveal edges of doors and windows.

## Footing Details

RendaPanel should have a minimum clearance of 75mm from the surface of the finished ground level.

# FINISHING

## Meshing

200mm wide, large aperture non adhesive mesh is stapled over all horizontal and vertical joints.
Internal and external corners are meshed with a self adhesive mesh. In the case of external corners, beads are placed on afterwards, fully glued and clouted

## Coating

A 3-5 mm base coat render is then applied to the entire wall area in two separate skim coats.
Fibres can be added to the first coat only to increase impact resistance.
The finished render should be level and provide the ideal substrate for the texture coating

In all cases, irrespective of the Texture system specified, Focal Point recommends that all texture coating systems are applied in accordance with the manufacturers recommendations.
The system must also be applied by accredited and skilled tradespersons.
We also recommend that the texture system should be top coated with a suitable exterior paint.

# FINISHING

Focal Point RendaPanel is an innovative 21st century exterior cladding system.

By its nature and system of installation and general quality controlled factory applied finish, we achieve a unique and dynamic cladding building panel.

The product allows the specifier or builder the flexibility to achieve a monolithic rendered façade that is not only cost effective but energy efficient and easily applied.

Correctly installed and rendered the cladding system will not crack, bulge, or give even the slightest hint of its jointing.

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