

**ROSEBURG CEDAR TONE SUPER PLY  
CAVITY SYSTEM  
TECHNICAL SPECIFICATION**

# Roseburg Cedar Tone Super Ply Cavity System

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For further information, please contact:

Cedar Products NZ Ltd  
14-16 Waikumete Road  
Glen Eden  
Auckland

Tel: 09 818 4279  
Fax: 09 818 5936

## **1.0 General Information**

### **1.1 Introduction**

The Roseburg Super Ply cavity system is a cavity-based wall cladding. It is designed to be used as an external wall cladding system for residential and light commercial type buildings where domestic construction techniques are used.

The system includes Roseburg Cedar Super Ply sheets, which are plywood wall cladding sheets that are finished with either a plain or grooved exterior face; cavity battens, cover battens and boxed corners, and timber moulding. The Roseburg Cedar Super Ply sheets are installed over 18 mm thick cavity battens to form a drained cavity.

The cladding system is finished with an exterior grade penetrating oil-based stain.

### **1.2 BRANZ Appraisal**

The Roseburg Super Ply cavity system has been appraised by BRANZ. Refer to Appraisal No. 495 (2006).

### **1.3 Roseburg Super Ply**

Roseburg Super Ply sheets are 11.7 mm or 15 mm thick plywood. The sheets are faced with premium grade Okoume. The inner plies are Oregon and the back veneer is minimum C grade softwoods. The sheets are coated with a protective stain prior to them being imported by Cedar Products NZ Ltd.

The 11.7 mm thick Roseburg Super Ply sheets have square edges and are available in sizes of 1200 and 1220 mm wide and 2440, 2745 and 3050 mm long. The exterior face of the sheets has a plain, light band-sawn surface. The 15 mm thick sheets have ship lap edges and are available in sizes of 1200 mm wide and 2440, 2745 and 3050 mm long. The exterior face of the sheet has a light band-sawn surface and is grooved at 100 or 200 mm centres.

All manufactured Roseburg Super Ply sheets are inspected and certified by APA, The Engineered Wood Association.

### **1.4 Finishing Stain**

At least 2 coats of an exterior quality, solvent-borne oil penetrating stain must be used over the front face, edges and a minimum 100 mm onto the back face (around the sheet perimeter) of the Roseburg Super Ply sheets to protect the plywood and give the desired finish colour to exterior walls. The stain must be recommended for use as a wall cladding stain by the manufacturer and must be roller or brush applied, not spray applied. Cedar Products NZ Ltd recommends the use of oil based penetrating stains manufactured by Watty, Cabots and Resene.

Refer to Section 4.0 for maintenance requirements.

## 1.5 Accessories

Accessories supplied by Cedar Products NZ Ltd for use with the Roseburg Super Ply cavity system include:

- Boxed corner boards - 90 x 19 mm and 65 x 19 mm Western Red Cedar with 6 x 6 mm weathergrooves.
- External cover battens - 65 x 19 mm Western Red Cedar with 6 x 6 mm weathergrooves.
- Exterior moulding - 19 x 19 mm Western Red Cedar.
- Roseburg Super Ply sheet fixings - 65 x 3.2 mm Grade 316 stainless steel, flat head annular grooved nails.
- External cover batten fixings - 65 x 3.2 mm Grade 316 stainless steel, flat or round head annular grooved nails.

## 1.6 Handling and Storage

Roseburg Super Ply sheets must be stacked flat, off the ground and supported on a level platform. They must be kept dry at all times either by storing under cover or by providing waterproof covers to the stack. Care must be taken to avoid damage to edges, ends and surfaces.

Cavity battens and other accessories must be stored so they are kept clean, dry and undamaged.

## 2.0 Design Information

### 2.1 Design Responsibility

The Specifier for the project must ensure that the details in this literature are suitable for the intended application and that additional detailing is provided for specific design or any areas that fall outside the scope and specifications of this literature.

### 2.2 Scope

This literature covers the use of the Roseburg Super Ply cavity system as an external wall cladding for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- constructed with timber framing complying with the NZBC; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- situated in NZS 3604 Wind Zones up to, and including Very High.

Roseburg Super Ply sheets must only be installed to vertical, flat surfaces.

The Roseburg Super Ply cavity system is designed for use with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills. *(The system relies on the joinery meeting the requirements of NZS 4211 for the relevant Wind Zone.)*

For applications which are outside the scope of this literature and details which are not in this literature the specifier must ensure that the design meets the relevant performance requirements of the NZBC.

Cedar Products NZ Ltd recommends that professional design advice is sought in these circumstances.

### 2.3 Building Regulations

The Roseburg Super Ply cavity system if designed, used and installed in accordance with the statements and conditions of this literature and the supporting BRANZ Appraisal, will meet the following provisions of the New Zealand Building Code:

- Clause B1 Structure
- Clause B2 Durability
- Clause E2 External Moisture
- Clause F2 Hazardous Building Materials

## 2.4 Ground Clearances

The finished floor level must have a minimum clearance to paved or unprotected ground as required by NZS 3604.

Roseburg Super Ply sheets must overhang the bottom plate on a concrete slab by a minimum of 50 mm as required by NZBC Acceptable Solution E2/AS1, Table 18.

The bottom edge of the Roseburg Super Ply cavity system must finish a minimum of 100 mm above paved surfaces or 175 mm above unprotected ground.

At deck or low pitch roof/wall junctions, the bottom edge of the Roseburg Super Ply sheets must be kept clear of any adjacent surface, or above the top surface of any adjacent roof flashing by a minimum of 35 mm.

## 2.5 Structure & Framing

Timber wall framing behind the Roseburg Super Ply cavity system must be treated as required by NZBC Acceptable Solution B2/AS1.

Timber framing must comply with NZS 3604 for buildings or parts of buildings within the scope limitations of NZS 3604. Buildings or parts of buildings outside the scope of NZS 3604 must be to a specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604. Use of timber framing must be in accordance with framing manufacturer's specifications.

In all cases studs must be at maximum 600 mm centres, with dwangs fitted flush between the studs at maximum 800 mm centres.

Cavity battens shall be minimum 45 mm wide x 18 mm thick timber, treated to Hazard Class H3.1.

## 2.6 Framing Tolerances

In order to achieve an acceptable wall finish, it is imperative that framing is straight and true. Framing tolerances must comply with the requirements of NZS 3604.

## 2.7 Roseburg Super Ply Sheet Set Out

Plain (non-grooved) Roseburg Super Ply sheets may be installed vertically or horizontally. Grooved Roseburg Super Ply sheets must be installed vertically only. All vertical sheet edges must be supported and fixed through the cavity battens to the wall framing. Horizontal sheet edges must be supported at fixing locations with cavity spacers 100 mm long maximum in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2(f). At the base of the wall, the sheets must hang 50 mm below the supporting framing.

## **2.8 Cavity Vent Strip**

The Roseburg Super Ply cavity system must incorporate a cavity vent strip to close off the bottom of the cavity and provide resistance against the penetration of vermin. The vermin strip must be in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3. The vent strip must be manufactured from PVC, aluminium or stainless steel, and be punched with 3 - 5 mm holes or slots which provide a minimum ventilation opening area of 1000 mm<sup>2</sup> per lineal metre of wall.

## **2.9 Building Underlay**

The Roseburg Super Ply cavity system must be installed over flexible or rigid wall underlay complying with NZBC Acceptable Solution E2/AS1, Table 23, or other BRANZ Appraised breather-type membranes.

Unlined gables and walls must incorporate a rigid underlay or flexible air barrier fixed to the framing, which meets the requirements of NZBC Acceptable Solution E2/AS1, Table 23. Where rigid underlays are used, the fixing length must be increased by a minimum of the thickness of the underlay.

## **2.10 Inter-storey Junctions**

Inter-storey drained joints must be provided to limit cavities to two storeys or 7 m in height, whichever is lesser in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.9.4(b).

## **2.11 Roseburg Super Ply Sheet Fixings**

Roseburg Super Ply sheets must be fixed through the cavity battens to the wall framing at maximum 150 mm vertical centres around the perimeter of the sheet and maximum 300 mm vertical centres in the body of the sheet. The fixings must be positioned a minimum of 12 mm from all sheet edges.

## 3.0 Installation Information

### 3.1 System Installation

This section of the literature should be read in conjunction with the installation details.

The selected wall underlay and flexible sill and jamb tape system must be installed by the building contractor in accordance with the underlay and tape manufacturer's instructions prior to the installation of the cavity battens and the rest of the Roseburg Super Ply Cavity System. Flexible wall underlay must be installed horizontally and be continuous around corners. Underlay must be lapped 75 mm minimum at horizontal joints and 150 mm minimum over studs at vertical joints. Generic rigid underlay materials must be installed in accordance with NZBC Acceptable Solution E2/AS1 and be overlaid with a flexible wall underlay. Proprietary systems shall be installed in accordance with the manufacturer's instructions. Particular attention must be paid to the installation of the wall underlay and sill and jamb tapes around window and door openings to ensure a continuous seal is achieved and all exposed wall framing in the opening is protected.

The selected cavity vent strip must be installed with the bottom of the vent strip flush with the underside of the cavity battens. *Note: A minimum 15 mm drip edge to the bottom of the Roseburg Super Ply sheet must be maintained at all times.*

Cavity battens must be installed over the building underlay to the wall framing at maximum 600 mm centres where the studs are at maximum 600 mm centres or at 400 mm centres where the studs are at 400 mm centres. The battens must be fixed in place with 30 x 2.5 mm hot-dipped galvanised flat head nails at maximum 800 mm centres.

When the cavity battens are installed at greater than 450 mm centres and a flexible wall underlay is being used, the underlay must be supported between the battens to prevent the underlay bulging into the cavity space when bulk insulation is installed in the wall frame cavity. Acceptable means of support include polypropylene strap at 300 mm horizontal centres, galvanised wire mesh or additional cavity battens.

#### 3.1.1 Aluminium Joinery Installation

Aluminium joinery and associated head flashings must be installed in accordance with the window manufacturer's instructions. A 7.5 - 10 mm nominal gap must be left between the joinery reveal and the wall framing so a PEF rod and air seal can be installed in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.6 after the joinery has been secured in place.

#### 3.1.2 Roseburg Super Ply Sheet Installation

Sheets must be dry prior to installation. Before fixing, the vertical and horizontal edges of the sheet, the ship lap joint and 100 mm minimum onto the back face of the sheet around its perimeter must be pre-stained with two coats of the finishing stain.

Prior to installation of the Roseburg Super Ply sheets, a check must be made to ensure all vertical sheet joints will be continually supported by framing. A check should also be made to



ensure each sheet is installed plumb. Sheets must be fixed through the cavity battens and cavity spacers to the timber wall framing with 65 x 3.2 mm flat head, stainless steel, annular grooved nails.

Sheets at battened joints must be installed with a 3 mm gap between the sheet edges. Sheets at ship lap joints must be installed with a 1.5 mm gap between the sheet edges.

At inter-storey level, sheets must not be fixed to inter-storey joists or blocking. At horizontal joints, there must be a 10 mm gap between sheet edges to allow for shrinkage of the framing. This gap must be flashed with a horizontal control joint flashing to prevent moisture entry. Refer to Detail 7 for further guidance.

### **3.1.3 Boxed Corners, Cover Battens and Mouldings**

External corners must be finished with boxed corners formed by nailing 90 x 19 mm and 65 x 19 mm Western Red Cedar boxed corner boards together with 65 x 3.2 mm flat head, stainless steel, annular grooved nails. The formed boxed corners are fixed through the Roseburg Super Ply sheets to the cavity battens with 65 x 3.2 mm flat head, stainless steel, annular grooved nails.

Battened joints must be covered with 65 x 19 mm Western Red Cedar cover battens fixed to the cavity battens or cavity spacers with 65 x 3.2 mm flat or round head, stainless steel annular grooved nails.

Internal corners must be finished with 19 x 19 mm Western Red Cedar moulding fixed through the Roseburg Super Ply sheets to the cavity battens with 65 x 3.2 mm flat head, stainless steel, annular grooved nails.

### **3.1.4 Finishing**

Follow the stain manufacturer's instructions at all times for application of the stain finish.

## **4.0 Maintenance**

Building owners are responsible for the maintenance of the Roseburg Super Ply cavity system. Annual inspections must be made to ensure that all aspects of the cladding system, including flashings remain in a weatherproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately. Sealant, stain coatings, flashings or the plywood sheets must be repaired in accordance with the relevant manufacturer's instructions.

Regular cleaning (at least annually) of the stain finish with water and a mild detergent is recommended to remove grime, dirt and organic growth, to maximise the life and appearance of the cladding.

Recoating of the stain finish will be necessary throughout the life of the cladding system. Re-staining must be carried out every 2-3 years in accordance with the stain manufacturer's instructions. Re-staining will be required more frequently on exposed northern and western facing walls. When re-staining, care must be taken to ensure bottom edges and ship lap edges are well covered and penetrated with the stain.

## **5.0 Health & Safety**

Roseburg Super Ply sheets must be cut in well ventilated areas. Hearing and eye protection should be worn.