



Finger Jointed Treated Pine - Cladding, Lining Board & Weatherboard Installation

Scope

When using introduced components such as flashings, sealants, paint etc please follow the manufacturer's instructions. Recommendations by Period Timber Mouldings (Aust) Pty Ltd are based on good building practice and are not a complete statement of all relevant data. As the installation of the products rely on factors outside the control of Period Timber Mouldings (Aust) Pty Ltd or our Manufacturers, Period Timber Mouldings (Aust) Pty Ltd assumes no responsibility for work/systems used in connection with the installation of our products and their suitability to satisfy relevant Building Codes and Regulations, Standards and Council Requirements.

Product Information

- Manufactured from environmentally responsible Radiata Pine.
- Engineered to produce long, defect free products.
- Kiln dried to between 8%-15% for stability.
- Treated with organic biocides and fungicides to H3.1 level.
- Factory coated with an architectural primer.

Design for Cladding & Weatherboard

To obtain best possible performance from timber cladding and weatherboards, the designer should give preference to building styles where the cladding or weatherboard is sheltered by wide eaves or verandas. This will give weather protection to the cladding or weatherboard itself, and provide increased comfort for the occupants by reducing heat build-up on the walls. A stud spacing of no more than 450mm should be used in the frame design to minimise the risk of distortion of the cladding or weatherboard. Consideration should be given to the installation of suitable thermal insulation behind the sarking, to reduce heat transmission from the external walls to the interior of the house.

Storage & Handling

- Keep all Claddings, Lining Boards, or Weatherboards dry and protected from the elements at all times before installation. Inside storage, under cover is best.
- Any storage shed or protective cover must be waterproof, but should also provide for a free-flow of air so that the cladding, lining boards or weatherboards is not affected by excessive heat build up. Protective coverings must not trap condensation, and outdoor storage areas should be chosen so that there is no possibility of water pooling under the covers, which could result in moisture uptake into the boards.
- Inadequate covering can result in: (a) water marking, (b) moisture absorption, which can result in problems with movement at a later stage, (c) excessive heat build-up, which can cause distortion of the boards.
- Schedule the delivery of Claddings, Lining Boards, or Weatherboards to site as close to the time of installation as possible.
- Unload Claddings, Lining Boards, or Weatherboards either by hand or a lifting device – do not 'tip' them off a truck deck.
- Carry individual boards on their edge.

- Do not drag boards in a way that will damage the surface. If the primer has been damaged and bare wood is showing, sand the area to a clean, smooth finish and re prime with a quality primer.
- Lay flat with bearers underneath at a maximum of 450mm spacing.
- Ensure Claddings, Lining Boards or Weatherboards are stored a minimum of 150mm off the ground
- If the surface underneath is damp, place a moisture resistant sheet (ie polythene) under the Claddings, Lining Boards or Weatherboards.

Before Installation

- **GENERAL SUPPORT SPACING:** The first real step in fixing lining of whatever type is to prepare or fix this 'framework' of extra noggin and/or battens/furring strips, ensuring that adequate framing is provided around window frames, door frames, at floor/wall, at ceiling/wall and around special fittings – lights, ductwork, switches, ventilators etc.
- Lining boards can be adequately fixed to conventional wall frames with stud spacing's of 450mm for 11 mm boards and 450/600 mm for boards between 12/19 mm.
- Battens or similar support should also be provided under butt joins when using lining boards.
- Check the moisture content and dimensions of the Cladding, Lining Board, or Weatherboard. If these are not as per our factory specifications, delay installation and contact Period Timber Mouldings (Aust) Pty Ltd for advice.
- Ensure that the framing complies with all requirements of the Australian Building Code and Regulations, Standards and Council Requirements, including the straightness of the framing and the moisture content being less than 20%
- Ensure the underlay's / insulation sheet products meet all the requirements of relevant Building Codes and Regulations, Standards and Council Requirements.

Flashings

- The design and fabrication need to comply with the Australian Building Code and Regulations.
- Flashings at corners, doors, windows, and wall intersections must be detailed to hold a head of water in harsh weather environments.
- If the flashing is to be in alongside any copper-based timber treatment, a layer of building wrap needs to be inserted between them as a barrier.

Sealants and Air Seals

- Sealants are only part of the system to keep buildings weather tight and should not be relied on as being the primary method of protection.
- All sealants need to be suitable for exterior use.
- Air Seals are required where a hole, penetration, or void (ie windows, metre boxes, doors) occur.
- Air Seals have two components being Backing Rod of a diameter to suit the gap and the Sealant (acrylic latex, silicon sealant or self-expanding polyurethane foam).
- Any excess sealant needs to be trimmed.

Direct Fix / Drained and Vented Cavities

- In low risk situations, Claddings and Weatherboards can be fixed directly to the studs. Check the relevant Building Codes and Regulations, Standards and Council Requirements.
- Cavity closures must be fitted to the bottom of the cavity to prevent vermin entry.

Painting and preparation

- Always check that Claddings, Lining Boards or Weatherboards are dry (no greater than 15% moisture content) and clean before applying any finishing coats of paint.
- Preparation and painting must be carried out in a tradesman like manner and to the current requirements of AS/NZS 2311 Guide to Painting of Buildings.
- Claddings, Lining Boards and Weatherboards must be undercoated on the face, edges and back of the board, before installation with the undercoat paint pre mixed to the same colour as the chosen topcoat colour. This will give the boards an extra level of protection during the construction process as well as giving good cover at the laps that may move as the total building settles over time. It will avoid joint 'see through' when the natural expansion and contraction of boards joined together occurs.
- Fill all nail holes with an exterior grade filler as per the manufacturer's instructions - this should be done as soon as practical to reduce the chance of moisture intrusion. Then sand to a smooth finish and spot prime.
- Seal all end cuts, mitres, notchings, borings or similar with a suitable good quality primer during the construction process.
- If the primed surface has been exposed to elements for some time, the surface may have become chalky. If this happens, sanding will be required. Ensure any exposed timber is resealed using a good quality primer before application of the undercoat and top coats.
- Select a paint colour with a LRV (Light Reflectance Value) of 45 or more (where 0 = Black and 100 = white measured to ASTM C1549 or ASTM E903) and a gloss level of 10% or more.
- Using darker than recommended colours will generate more heat in the board and can promote resin bleed.
- Apply two top coats of a high quality exterior paint as per the manufacturer's recommendations.
- Cladding, Lining Boards and Weatherboards should be suitably protected until required, correctly prepared, and then installed without delay.

Sarking

Sarking is a waterproof material that is fixed to the studs directly behind external cladding. The primary function of sarking in walls, is to direct any water that may have penetrated the cladding back to the outside of the structure. It also provides a barrier to prevent draughts, wind driven rain and dust from entering the wall cavity. Sarking must be weatherproof but vapour permeable, and is often made from aluminium foil or bitumen bonded insulation. Wall sarking is fixed on the outside of the studs, from the top plate down, and over the bottom plate and flashing, or otherwise, in accordance with the manufacturer's instructions. Additional detailing may be necessary where condensation is a concern. This occurs where there is a large temperature difference between the indoor and outdoor environments – as in very cold climates. Cavity insulation can help by reducing cold outer air from meeting warm inner air. In extreme conditions, a devoted vapour barrier on the warm side of the insulation may also be necessary. Sarking requirements must satisfy relevant Building Codes and Regulations, Standards and Council Requirements.

Fasteners

Selection of the correct fastening nails is important to the performance and appearance of timber cladding. Hot dipped galvanised or other non-corrosive nails should always be used to fasten timber cladding. Plain steel nails should not be used, as they are likely to rust, causing, unsightly stains, and gradual deterioration of the timber around the nail. Flat head nails may be used to provide additional restraint of cladding, lining boards or weatherboards. When using gun nails, particular care must be taken to ensure that the head type, shank size and length, and protective coating, is suitable for the board being fastened. Minimum nail sizes for fastening are given below. Our experience is that hand nailing with the correct size galvanised nail has generally proved more successful than fastening with gun nails. However, where there have been problems with cladding fastened with gun nails, it has often been the result of incorrect nail choice.

Nailing Schedule

- Selection of the correct fastening nails is important to the performance and appearance of timber cladding.
- Period Timber Mouldings (Aust) Pty Ltd recommends hand nailing.
- Hot dip galvanising should always be used to fasten timber cladding and must meet the requirements of AS/NZS 4680:2006.
- In sea spray zones, all fittings must be type 316 stainless steel.
- Use jolt head or annular grooved nails.
- Nails must penetrate each stud by a minimum of 35mm.

Profile	Application	Size mm	Nail size	Nail Position
Cladding	Direct Fix	138 x 18	65 x 2.8 (annular threaded) galvanised hand nails	Two nails per board at each stud.
Lining Board	Direct Fix	138 x 11	50 x 2.0 (annular threaded) Galvanised hand nails	Two nails per board at each stud.
Weatherboard	Direct Fix	166 x 18	65 x 2.8 (annular threaded) galvanised hand nails	Single nail per board at each stud 35mm from bottom of board.

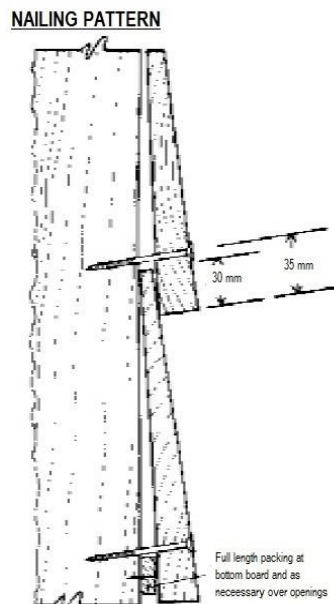
INSTALLATION

Fixing Method

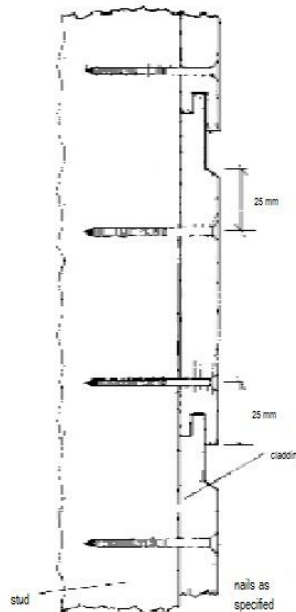
- No matter which of the wide range of wood based panelling products selected, all would normally be fixed to some backing framework. This 'framework' could be the actual house frame itself (studs, noggin and plates) or to battens or furring which provides spaced fixing points at a nominated spacing depending on the product used.
- Face nailing is conventional & quick; two nails are required at each fixing point for boards over 100mm wide. Secret nailing is not applicable to Period Timber Mouldings (Aust) Pty Ltd range of lining boards as it is difficult to achieve good stable fixing with this method if the boards are over 100mm wide, due to the risk of cupping.
- Hand nailing is recommended (see nailing schedule). Installing Cladding, Lining Boards or Weatherboards is a 'finishing' operation, not a framing one.
- Nails should not penetrate the tip or thinner edge of a weatherboard, or where the tongue and groove overlap occurs of the board beneath of cladding. Boards above and below are not to be nailed together, so that each board is free to shrink and swell individually and so reduce the chance of cupping, cracking and splitting.
- Locate nails approximately 35mm above the bottom edge of the weatherboard, and 25mm above the bottom edge and rebate edge of the cladding. See the diagram below.
- Nails must have a minimum penetration of 35mm in to the wall framing.
- Nails should be driven with care. Heavy and excessive nailing, particularly with regard to nail guns, may distort the board and cause splitting during weather changes.
- If nail gun application is used, make sure that the gun does not damage the surface of the board, the pressure is correctly set to drive the nail below the timber surface but gives adequate holding, and that the galvanising is of the necessary standard.
- Use only one nail per board at each fixing point for weatherboards and two nails at each fixing point for cladding and lining boards.
- Punch the nail to below the surface and fill with an exterior grade filler as soon as is practical.
- Pre drill boards (to avoid splitting) for nail locations within 50mm of board ends.

Fixing of Cladding and Weatherboards

Weatherboard



Shiplap Cladding



Cuts / Joins

- Minimise joins by planning your cutting to use full lengths where possible.
- Where joins are necessary they must be done over studs or battens. Cut the joint at a 45° angle and face this away from the prevailing weather.
- Stagger the joins so that no two joins are directly overlapping. Avoid placing the joint over water drip lines, for example under the side edge of a window.
- As the end grain of timber is particularly porous, the ends of each board must be effectively re primed and undercoated, prior to installation, to prevent moisture absorption during rainy conditions. Apply a liberal coat (or preferably two) of undercoat. Moisture absorption into the end grain can result in paint peeling, and also premature deterioration through rotting, as the moisture is trapped in the board by the finish coats.
- For extra protection, an exterior grade silicon can be used in between the joining pieces.

Installation

- Start fixing weatherboards near the centre of the board and work your way outwards.
- Weatherboards must have a minimum lap of 30mm.
- The bottom weatherboard should overlap the bottom plate or bearer by a minimum of 50mm.
- The bottom edge of the cladding or weatherboards should be cut to slope inwards and upwards from the front face at an angle of 15 degrees so that water will be readily shed from the front edge.
- Cladding boards, which have a tongue and groove profile, must always have the tongue edge up and groove down.
- Cladding boards must be fixed with the overlap and groove closely fitted.
- To prevent water entering the frame during rainy conditions, joints between adjacent boards, and at timber stops, should also be sealed with a paint compatible mastic or silicone sealant. Place the mastic on the ends of the boards before installing and fastening.
- Diagonal boards should be cut to length at an angle so that the joints are vertical once the board has been installed, (rather than being "squared off" as would be the case with horizontal cladding), to reduce the amount of water entering the joint.

- Where the cladding abuts masonry, moisture can be prevented from being taken up by the boards, by leaving a small gap which is then protected by a cover strip set in mastic, or, alternatively, by sealing the ends of the boards and then sealing the joint.
- Make sure the bottom board of cladding or weatherboard is no closer than 200mm from a paved/concrete ground surface or 225mm from an uncovered ground surface. Adjacent earth or pavement should be sloped away from the wall, otherwise moisture uptake may occur, resulting in deterioration of the cladding near the ground.

Maintenance

- All products are affected by their surrounding environment. By maintaining your property to the level appropriate to its surrounding environment, you will ensure its long-term performance and beauty.
- Paint generally requires up to 4 weeks to completely cure, so keep cleaning to a minimum until after this period to avoid any potential damage.
- Maintenance is generally recommended to be carried out every 12 months, but in more corrosive environments (ie, coastal areas or industrial or geothermal atmospheres) every 6 months is recommended. Pay special attention to areas that do not get regular rain-washing such as under soffits.
- Wash down to remove salt deposits, dirt build up, mould and insect traces (do not use a water blaster).
- Moss, mould and lichen can cause long-term damage to paint so special care needs to be taken in removing it. Consult your paint supplier for the appropriate cleaner.
- Check sealants and replace them if they are showing signs of loss of edge adhesion or surface cracking.
- Check flashings and replace any that have been damaged to the point of allowing water intrusion.
- Check for missing attachments and loose fittings.
- In areas of high Weather tightness risk take particular care and resolve any issues immediately to avoid a larger long-term problem.
- Maintain, and where required reapply paint finishes in accordance with the paint manufacturers recommendations.

Recommendation :

Use lighter colours for topcoats. This will reduce the effect of solar energy increasing the temperature of the boards, which may result in adverse weathering of the timber products.

We recommend colours with a light reflectance value of 45 or more (where 0 = Black and 100 = White).

Note: Extreme climates that result in prolonged dry spells and heat, or prolonged wet spells and cooler periods are likely to result in contraction and or expansion of the timber products. This is normal for most building products and should be allowed for when designing the structure, and installing Finger Jointed Treated Pine products.

See our website for more information.

www.periodmouldings.com.au