Design Pine

Innovative Timber Ideas

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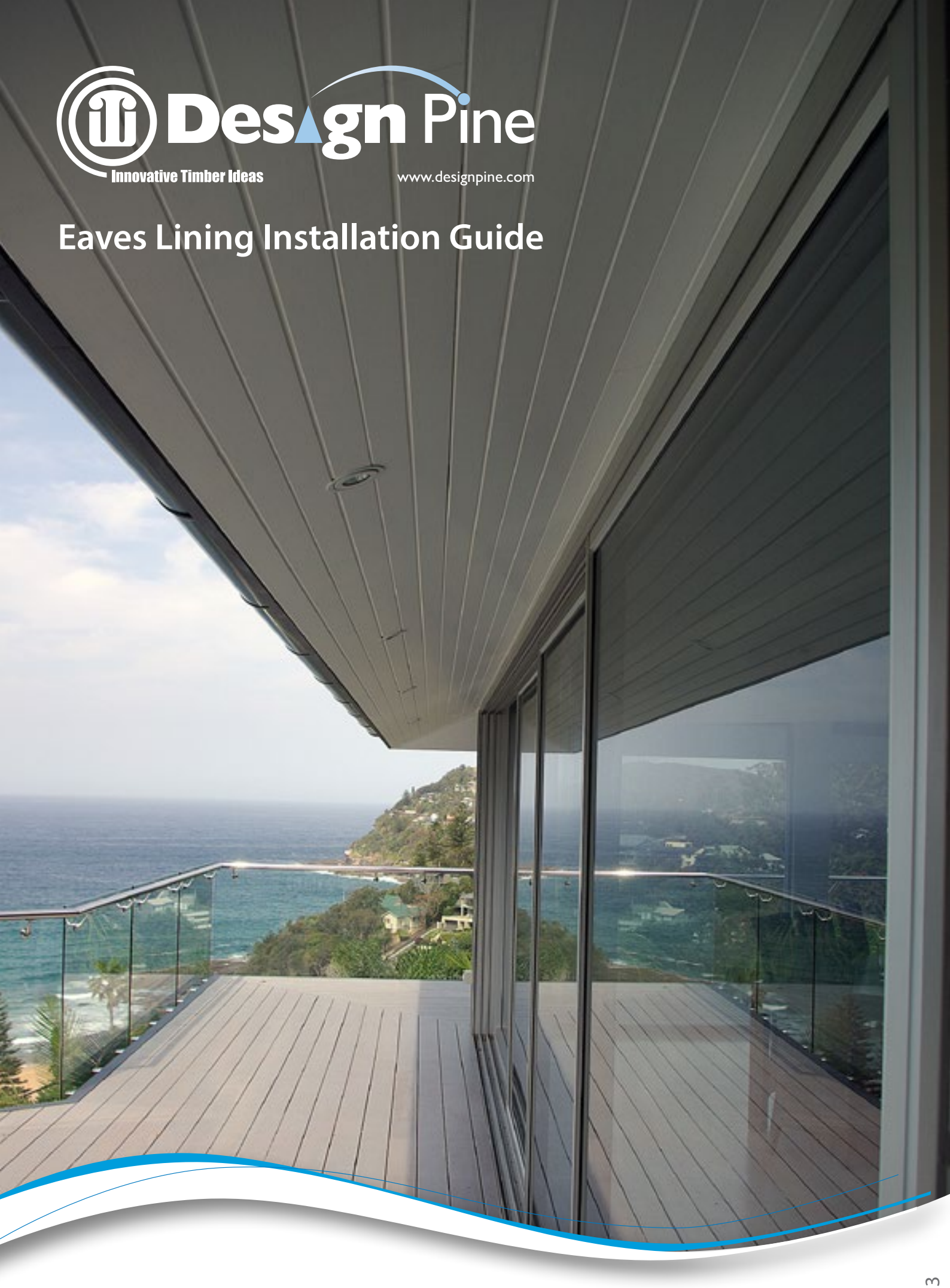
Eaves Lining Installation Guide



Design Pine Eaves Lining - Installation

Like most building products, Design Pine eaves lining has both advantages and limitations therefore a clear understanding of the product is necessary, please take the time to read through these below.

Advantages of Design Pine eaves lining:

- It has a history of successful use and performance.
- It is relatively easy to fix to the supporting framework.
- It has good impact resistance.
- It accepts a range of paint finishes.
- It is available in a range of profiles.
- It can be maintained easily
- Looks great

Limitations of Design Pine eaves lining:

- Fixing to the supporting framework can be slower than that of sheet materials such as fibre cement.
- Installation short cuts can lead to a shortening of service life.
- A degree of skill is required for joints and corners.
- Timber can be subject to dimensional movement with changes in moisture content. Correct fixing to the supporting framework will accommodate normal seasonal changes but sometimes these cannot be eliminated altogether and some movement in Design Pine eaves lining should be expected as climatic conditions change on site.
- Some boards may be subject to resin bleed which may spoil the finished appearance. Remedies are available—(refer page 6).
- The end grain requires sealing to reduce moisture uptake.

PRIOR TO FIXING Design Pine Eaves Lining (to the supporting framework)

Handling and Storage on the building site for Design Pine eaves lining will provide a long lasting external eaves lining for buildings but attention must be paid to the correct storage, handling, fixing, finishing and maintenance of the product. On site storage should be in a dry, well-ventilated area. The boards should be stored on gluts of a uniform height (minimum 60mm) that are no more than about 1.5 metres apart. There should be a sheet of plastic or similar between the gluts and the boards to prevent any rising moisture affecting the boards. Care must be taken to ensure this protection cannot unintentionally collect water and create pools of water that soak into the timber. It is preferable to

leave the plastic wrapping of the pack in place but the pack must be protected from direct sunlight to avoid sweating under the plastic. If the boards are delivered without wrapping or with damaged wrapping, cover the stack with plastic, building paper or sheet material that is firmly held in place to keep the boards clean and dry. Boards should not be stored in rooms which have recently poured concrete slabs or have been recently cement rendered as they will release moisture for weeks to come. Other building products should not be stored on top of the boards.

Board preparation

Standard preparation methods should be followed prior to installation:

- Check that the board width is equal to or very close (+/- 1mm) to the specified width. A significant difference would indicate that the moisture content of the boards is unusually high or unusually low and that fixing should not proceed until the moisture content of the boards is within an acceptable range.
- Eaves Lining is generally supplied to the site with a moisture content of about 12% (+/- 2%). At the time of fixing to the supporting framework, the eave lining must have a moisture content close to the average moisture content that is expected during service life at the particular site. For those sites where 12% (+/- 2%) is too high or too low for the expected average moisture content during service life, some acclimatisation may be required.
- Recoat any bare timber areas exposed through cutting or notching with an approved treatment re-sealer (Protim Solignum XJ or Tanalised Enseal).
- Remove all dirt, dust or any contaminants from the board surface.
- Sand any uneven surfaces.
- Apply Design Pine primer to any exposed timber surfaces to aid painting.

Note: The painter must take responsibility for the preparation of the substrate, and ensuring the substrate is adequate prior to painting.

First layer of top coat applied prior to fixing to the supporting framework

It is recommended that one all-round preliminary topcoat of exterior grade paint which is colour matched to the final finishing coat, be applied to the Design Pine Eave Lining boards prior to fixing. By doing so, the rate of moisture uptake or loss will be reduced by a similar degree on each surface of the board.

If the all-round coat can't be applied, it is important that one coat of the colour matched exterior grade paint is applied to at least that area of the face of the primed board adjacent to and tounge and groove on both edges. This prevents the appearance of a line of different colour if there is any shrinkage when the moisture content of the boards comes into equilibrium with the conditions on the building site or when, during the service life, there is an extended period of hot, dry weather.

FIXING Design Pine Eaves lining (to the supporting framework)

Care must be taken when fixing eaves linings to ensure that the integrity of any flashings is not compromised as it may affect the eave linings performance.
Hot dipped galvanized steel or stainless steel fasteners should be used in applications that are exposed to the weather. The service life of the eaves lining may be reduced if inappropriate fasteners are used. Hand driven nails into hardwood and cypress battens or studs should be 2.8 mm diameter plain shank and either flat head or bullet-head. Hand driven nails into softwood battens or studs should be 3.15 mm diameter annular threaded (ring) shank and either flat head or bullet-head. The minimum length of nails should be 30 mm (ring shank for softwood studs or straight shank for hardwood studs). A general rule of thumb is 1/3 of the nail length is for the eaves lining and 2/3's to penetrate the supporting frame work (stud). Ceiling rafter / batten spacing for best performance of the eaves lining should be set at 600mm centres. Otherwise you may get boards starting to sag between fixing.

The recommended method of fixing is with two nails at each batten or rafter to secure the board, prior to nailing we recommend the use of an exterior adhesive which will not be affected by any solvent coming from preservative in the eaves lining (check with adhesive supplier). As a rule of thumb, the two nails should be positioned approximately one third of the width of the board in from each edge of the board. Where nail guns are used, care should be taken to ensure that excess nail pressure does not distort the boards (especially when the nailing point is positioned where the back face is not in contact with the batten or stud). Nails are not to be over driven (heavy nailing distorts the wood and may cause splitting during seasonal weather changes).

Expansion Gap

With profiles that are tongued and grooved or that are rebated, care must be taken to ensure that there is a clearance within the overlap of two adjacent boards to allow for any expansion that might

take place in the width of the board. The recommended gaps are 2 mm for butt joins on board up to 3m long and 5mm for longer boards. This gap is best achieved with the aid of an appropriate and removable spacer. If the spacer is not removed, the purpose of using the spacer is defeated. With tongued profiles, the tongue edge should always be up. A side to side expansion join should be planned for every 10 boards. Never wedge the boards in tight as this may compound expansion or contraction issues down the track.

For Eaves linings require an expansion gap around the outside of the boards that allows for approx 1.0mm for each number of boards being installed, for example 35 boards side by side would require an expansion gap of 35mm needs to be left around the outside edge of the boards. This expansion gap should be split in half and put on both sides to allow for possible expansion and can be easily covered by some Design Pine Quad, Scotia or DAR material.

Joint Sealing

All joints irrespective of the finish or type of treatment process should be re-sealed, including stopped ends, with a mastic or silicone sealant that is compatible with the intended paint finish. The sealant should be placed onto the ends of the boards before pushing the ends together. Any excess sealant should be removed from the faces of the boards as soon as the boards are fixed.

FINISHING AFTER FIXING Design Pine cladding

Prior to painting, make sure that the surface of the primer is not chalky and that the primer adhesion is good. The 'X' test can be used to check this.

Topcoats

One preliminary topcoat of exterior grade paint should be applied unless an all-round preliminary topcoat was applied prior to the boards being fixed. One or two further topcoats of exterior grade paint should be applied after fixing in accordance with the paint manufacturer's recommendations. The minimum paint film requirements can be found on the tin and is a minimum to gain paint performance, wet film combs can be used to measure application rates.

Colour of Paints

The use of light coloured paints is highly recommended. Research has clearly demonstrated that lightly coloured paints provide much better service life for both the timber and paint used externally. Dark coloured surfaces (especially on north or west facing walls) heat up significantly more than light coloured surfaces and this in turn will cause timber to dry to a lower moisture content than it otherwise would. The subsequent greater shrinkage and movement may lead to checking, splitting and perhaps short term cupping. Higher temperatures also promote resin bleed in some boards of those species that can be prone to it.

As a rule of thumb, the Light Reflective Value (LRV) of the paint should be greater than 30%. This will ensure your paint colour is not too dark. Light reflective paints should be used where possible. Colour charts to assist your paint selection can be found on the Design Pine website.

Resin bleed

Although some softwood species such as radiata pine can be prone to resin bleed, only some boards are affected. Those boards showing obvious signs of being resinous are excluded as part of the grading process. Consequently, almost all the boards supplied to the market do not contain sufficient resin to cause any problems. However, there is the occasional board that does not show obvious signs of being resinous, but does contain sufficient resin to cause a problem after the finished wall has been exposed to a period of hot weather. In such circumstances the resin can be cleaned off the surface of the board.

Resin is a mix of turpentine and rosin and tends to migrate to the surface of the timber when the timber is subjected to heat. If the resin does migrate to the surface of timber, it appears as a honey-coloured substance which is sticky to the touch. As the turpentine slowly evaporates, the rosin solidifies. If the surface of the timber is painted, the resin can cause discolouration and/or blistering of the paint or it can bleed through the paint. Knots often have higher concentrations of resin and this can result in discolouration of the painted surface at the knot, known as knot bleed.

Resin that does bleed through topcoats may be washed off with mineral turpentine or allowed to crystallise and then scraped off. A hot-air gun applied to areas that exhibit bleed may assist in bringing resin to the surface. Resin bleed can recur the following summer.

Application of a second oil-based primer to rebind pre-primed material prior to installation has been shown to improve resistance to resin bleed. An area of a board exhibiting resin stain can be sanded back to bare timber and a resin sealer applied prior to re-painting. Refer to Resin rectification procedures on the Design Pine website.

MAINTENANCE

The long term performance of Design Pine eaves lining is dependent on regular and effective maintenance. The frequency of maintenance will depend on the type of paint used and the degree of exposure to the weather. The re-coating and any further preparations should be carried out in accordance with the paint manufacturer's recommendations. Before re-coating, the cladding should be cleaned and the joints resealed where required.

SAFE WORKING

Personal Protection Equipment should be worn to protect of the eyes, nose, mouth and hands when sanding, sawing or planing timber or timber products. Refer to tool manufacturer's safe working recommendations for particular items of equipment. MSDS's are available on the Design Pine website for further information.

DISPOSAL OF OFFCUTS AND WASTE

Do not burn off cuts or sawdust from any preservative treated timber. Such offcuts and sawdust should be disposed of by approved local authority methods.

PRESERVATIVE GUARANTEE

To maintain the limited guarantee offered by preservative suppliers details pertaining to the products used on the project must be kept. For example: end tags, proof of purchase. Check with supplier to ensure all necessary details are completed. Most preservative guarantees require every cut, rebate or hole to have a preservative sealer applied. Check with the supplier for further information