Installation Guidelines

Design Pine should be installed in accordance with the Building Code of Australia.

The safe handling procedures

The following recommendations are for the safe handling of Design Pine:

- Keep work area clean and keep airborne wood dust below recommended maximum exposure levels. Use mechanical air extraction if necessary. Brush wood dust off the skin.
- Use appropriate personal protection such as dust mask, safety glasses, ear muffs and gloves when using power tools on the timber.
- Cotton or light gloves are recommended for general handling.
- Wash hands after use.

A material safety data sheet (MSDS) is available on the design pine website (www.designpine.com).

Product Selection

Design Pine products are created with specific applications in mind, resulting in some products being limited to one application. This may be due to thickness, profile or exposure in other applications. When a product is used in an alternate application it may not perform up to your expectations, therefore ensure the product is fit for purpose when designing your project. For example eaves lining boards should only be used as eaves lining boards due to the profile.

Fixings

While Design Pine preservative is non-corrosive to exterior grade metal fasteners. Hot dipped galvanized steel or stainless steel fasteners should be used in applications that are exposed to the weather. Using the correct fixings will prolong the life of your structure. Wide boards (such as 230x25) are prone to cupping over time and should be screwed in place to minimise the risk of this occurring, especially if fixing into the end grain of a rafter or similar.

For best performance the fixings should be within 50mm of the edges to the board for maximum support against cupping.

When fixing through a mitre joint screw holes should be predrilled to prevent the end of the boards splitting, an exterior construction adhesive will also assist in prevent the joint to open up.
Use good building practices in compliance with the Building Code of Australia, safety codes and local government requirements. Use fasteners that are suitable for the intended application and in line with the manufacturer's instructions. For example ring shank nails into softwood and twist shank into hardwood.

Board Preparation
Follow standard preparation methods:

1. Ensure the board is equal to the original size or has the correct moisture content (8-14%) prior to installation.
2. Any surfaces exposed through cutting or notching must be recoated with an approved preservative sealer (Protim Solignum XJ or Tanalised EnSeal).
3. Remove all dirt, dust or any contaminants from the board surface.
4. Fill any defects, damage and or nail holes with an approved exterior filler.
5. Sand any chalky or uneven surfaces.
6. Prime all bare areas (including cuts, and rebates) with Design Pine primer.
7. Apply two coats of quality exterior paint as per manufacturers guidelines e.g. Taubmans Endure Exterior

If the primed surface has been exposed to the weather for an extended period of time the surface may become chalky. If this happens sanding and re-priming will be required.

Painting tip
When installing Design Pine, applying the first top coat before installation can save time later as well as help to protect against moisture uptake during the construction and finishing process. As a minimum for weatherboards, it is highly recommended that the top 50mm is top coated (the area under the lap) prior to installation as this will prevent the blue primer showing through if the board does expand and contract as a result of climatic change

Colour Selection
The use of a **light coloured topcoat is highly recommended**. Dark colours absorb light/ heat, which can cause distortion, surface cracking and/or resin bleeding. Paint manufacturers can advise the light reflectance value (LRV) of a colour. The higher the LRV value the less heat the substrate will absorb and the longer the expected life of the paint finish. Light/heat reflective paints should be used if a darker colour is specified as they reflect the light and prevent it from being absorbed, in turn reducing the board's temperature. For example Resene Cool Colours (www.resene.com.au).

The recommended LRV for topcoats for Design Pine products is greater than 30%

Cutting
Design Pine can be cut using standard wood working tools. Radiata pine is a softwood species and can be very easily worked into any desired shape.
When cutting Design Pine (as recommended with all treated timber) the correct personal protective equipment should be used. This includes gloves, goggles, and mask.
All cuts or notches made in Design Pine should be resealed with a preservative sealer and coated with Design Pine exterior primer before installation in complete.

Ground Clearance
All H3 treated timber components such as Design Pine are not to be placed in direct contact with the ground. Refer to the Building Code of Australia for minimum clearances.

Re-seal cut and notches
When a piece of Design Pine is cut to length, rebated or drilled it is required to seal the newly exposed surface with a suitable preservative sealer. Design Pine should not be rip sawn, re-thicknessed or heavily planed as these actions may reduce the protection offered by the treatment.

Mid Span Blocking for Rafters
The installation of rafters with a clear span greater than 2500mm should have solid blocking inserted at 1200mm intervals to support the cross sectional stability of the rafters. This will assist in keeping the pergola square and true over time.

Expansion Joints
When planning to either cover a full external ceiling with Design Pine **Eaves Lining Boards** or external wall with Design Pine **shiplap** ensure a prevision for an expansion joint has been included, just like timber flooring. Plan for an expansion joint to be every 10th board, this will minimise the risk of problems down the track. If a wall or ceiling is completed without expansion joints and the boards expand on a hot or humid day it could lead to all sorts of problems including popping boards out.
Remember Design Pine is a natural product and it will change as climatic conditions change. We do everything we can to keep it as straight and stable as possible but this is only 11mm thick which makes our job harder. Moisture content prior to installation should be between 8-14%.

Installation of Panelling Products
Installation details of Design Pine panel products (e.g. Shiplaps and linings) refer to TABMA Panelling installation guide in the 'Hints and Tips' Section of www.designpine.com. Design Pine Eaves Linings boards may only be 11mm think but they perform as well as conventional 12mm pine products.

Expansion and Contraction of boards – Effects from Moisture

The Design Pine primer contains a moisture management system which slows the rate of moisture uptake into a board but does not offer a moisture vapour-proof coating. When boards have been exposed to periods of either high humidity or rain while in the primed state, moisture may penetrate the wood fibre causing the board to expand or swell slightly. If this occurs it should be left unpainted to dry out until it returns to the original profiled size. E.g. **Rusticated weatherboard** is 185x18mm when produced, it may expand by 2-3mm if left exposed, and an alternate method is to monitor the moisture content of the board until it returns to 8-14%. This will prevent unsightly lines occurring on the painted wall once the board normalises from their expanded state. Store boards in a dry well ventilated area (refer to storage for more details).

Disposal of off-cuts

For normal domestic and trade users, Design Pine off-cuts and saw-dust is classified as non hazardous waste and can be disposed of waste through normal waste collection and disposal services. Industrial users generating large amounts of treated timber waste may require special approval for disposal.

Design Pine off-cuts should not be burnt for domestic heating or cooking and should not be used for garden mulch or animal bedding.

Storage

Design Pine needs to be stored in a dry well ventilated area to prevent moisture uptake. Stack Design Pine in a flat location on bearers spaced no greater than 1500mm apart, this will assist in keeping the boards flat. Plastic sheeting should be placed under the stack to minimise the impact of moisture rising from the ground or concrete slab on which the timber is stacked.

Any further questions please do not hesitate to contact a Design Pine office.