EzitrimPlus Internal Lining - Installation

Like most building products, timber products has both advantages and limitations therefore a clear understanding of each product is necessary.
Advantages of timber 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 machined from a range of species although the most common species used today is radiata pine or Cypress fir sourced from managed renewable plantations.
- When fixed to the supporting framework correctly, it can accommodate movement resulting from moisture uptake or loss due to normal seasonal changes.
- It can be maintained by the homeowner.

Limitations of timber eaves lining:

- Fixing to the supporting framework can be slower than that of sheet materials. 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.
- Regular maintenance is required.
- Some boards may be subject to resin bleed which may spoil the finished appearance. Remedies are available—(refer page 8).
- The end grain requires sealing to reduce moisture uptake.

Successful use of timber requires:

- Selection of sufficiently durable timber.
- Selection of appropriate corner mouldings, flashings and the like.
- Correct fixing to the supporting framework and proper detailing.
- A finish that minimises stress on the timber. A light coloured finish is recommended.
- An understanding by the building owner that the cladding will need periodic maintenance to maintain its appearance.

Poor performance of timber cladding usually results from one or more of:

- Poor design and/or detailing.
- Poor workmanship and incorrect fixing to the supporting framework.
- Dark coloured finish (i.e. paint)
- Insufficient allowance for timber movement.
- End grain and onsite cuts not being sealed.
- Insufficient provision to prevent moisture being trapped behind the cladding.

PRIOR TO FIXING EzitrimPlus Internal Lining (to the supporting framework)

Handling and Storage on the building site

Ezitrim Plus will provide a long lasting internal 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.

Sarking / building paper / vapour membrane

The supporting framework should be clad on the outside with a waterproof, but vapour permeable or breather type sarking/building paper to prevent penetration of water into the building under severe rain and wind conditions. The sarking/building paper should be fixed to the outside of the studs using disc type nails at 600 mm centres. Horizontal laps must not be less than 50 mm and vertical laps must be on studs.

The use of non-vapour permeable aluminium foil or plastic sarking directly behind timber cladding is not recommended as trapped vapour may cause cupping and distortion of the cladding.

Board preparation

Standard preparation methods should be followed:

- 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.
- Cladding is generally supplied to the site with a moisture content of about 12% (+/- 2%).

At the time of fixing to the supporting framework, the cladding 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.

- Remove all dirt, dust or any contaminants from the board surface.
- Fill any defects or damage with an approved filler, including punched nail holes.
- Sand any uneven surfaces.

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 interior grade paint which is colour matched to the final finishing coat, be applied to the primed cladding 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 under the overlap of the board that will be above it. This prevents the appearance of a line of different colour just under the overlap of the upper board *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.

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.

FIXING Ezitrimplus Internal lining (to the supporting framework)

Care must be taken when fixing eaves linings adjacent to windows and doors to ensure that the integrity of the flashing around the windows and doors is not compromised and that moisture is not trapped at the ends of the cladding boards.

The service life of the 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 lining and 2/3's to penetrate the supporting frame work (stud).
The recommended method of fixing is with only one nail at each batten or stud to secure the board to the battens or studs plus the use of an adhesive .
For most profiles, it is important that only one nail be used at each batten or stud so that each board can expand or shrink in width individually during seasonal weather changes. The next board is fixed in the same way and the lower edge of the second board then holds the upper edge of the first board in place. The nail in one board should not penetrate the adjacent board and should not interfere with any expansion or shrinkage in the adjacent board.
If two nails are to be used at each batten or stud, the nails should be spaced so as to have the least interference to any expansion or shrinkage that *may* occur. If the nails are too far apart, the board may split at one or both of the nails *if* there is any shrinkage in the width of the board. 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.
Joint Sealing
All joints irrespective of the finish 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 Ezitrimplus Internal Lining

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. Use a sharp blade to cut an 'X' into the surface of the coating and press sticky tape over the 'X', if the primer lifts the adhesion is not good and should be sanded off.
Paint systems tend to last longer when each longitudinal arris of the cladding board is rounded rather than being square (sharp).
Topcoats
One preliminary topcoat of interior 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 interior 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.

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.

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.