

## WEATHERBOARD/TIMBER CLADDING

### Advice and Warning to Building Owners

#### MOVEMENT IN WEATHERBOARDS

When solid timber and proprietary brand manufactured weatherboards are subjected to changing weather conditions and changing levels of moisture, they become dimensionally unstable and are likely to "move" after they are installed. The amount of movement will vary from minimal to significant, dependant on a range of factors including the product type, the timber species, the location/orientation, the type of and colour of applied finish and exposure to changing weather conditions.

#### MANUFACTURED /COMPOSITE / ENGINEERED TIMBER WEATHERBOARDS

Whilst weatherboards which are manufactured from composite materials are more stable in most service conditions they can still move and can show evidence of shrinkage and subsequent "gapping" in surface coatings and jointing compounds. No guarantee can be given that manufactured weather boards will be dimensionally stable in service. Any such movement after installation is beyond the control of the Builder.

The manufacturers installation instructions and guidelines relating to applied finishes must be adhered to.

#### SOLID TIMBER WEATHERBOARDS AND SOLID TIMBER CLADDING.

Solid timber weatherboards and cladding are particularly at risk of movement after installation. Movement may include shrinkage, warping/twisting and splitting. All timber products will take up or lose moisture and no two pieces of timber will behave the same. Builders and suppliers have no control over the in-service performance of any timber, therefore when a timber product "moves", the Builder (or Joiner) should not be viewed as having used inferior materials. Unfortunately, dimensional instability is the inherent nature of timber.

#### SUPPORTING INFORMATION

In the past sawn timber was harvested from older, larger and more mature trees which resulted in a board product which had a stable cell structure, tended to display less inherent growth stresses and which was more durable and stable in service. Regrettably today, timber is not as durable and less stable because boards are now milled from smaller diameter trees, and they are processed for sale in a much-condensed time frame. Another negative is that the natural stabilisation of timber has been compromised by shorter production times. Anecdotal evidence suggests that timber which is produced today is characterised as being less durable and having a greater incidence of dimensional instability. Owners should be aware that softwood timber products such as Radiata Pine or Baltic Pine are particularly unstable, less durable and unpredictable in their service performance.

Locally produced "select grade" timber is kiln dried to a specified moisture content level, usually in the 8 to 12% range, however imported timbers may not be kiln dried and when used as cladding there is even greater potential for shrinkage in service. The use of timber which is not dried to controlled standards is not recommended.

Natural timber readily takes up and retains moisture and is affected by changes in atmospheric moisture content, however, if boards are suitably protected by approved oils and paint finishes moisture changes are limited and the performance/durability of the board products can be significantly improved. It should be noted that no applied treatments will provide guaranteed protection. Acrylic and oil paint finishes are far superior to "clear oil" treatments, however, regardless of the applied finish, Builders cannot guarantee weatherboards against deterioration and dimensional instability. Owners should be aware that where no surface treatment is applied, boards will quickly discolour, be less durable, be very likely to split, warp etc and have a much-reduced in-service life. Owners should also be aware that oil products only offer only marginal protection. Even with frequent re-application, the timber and surface finish will discolour and deteriorate rapidly.

The application of timber surface coatings can significantly reduce moisture loss or absorption, and will help in protecting the timber, however, because most coatings "breathe" they limit rather than prevent changes in moisture content. The importance of correct pre-priming, application and maintaining of surface coatings cannot be overstated. Regardless of the type of applied coating, all surfaces including overlaid/lap surfaces, edges and ends must be coated with an adequate number of coats before, during and after the installation. Weatherboards which are excessively exposed to direct sun, rain and constant changes in temperature/moisture levels will be problematic regardless of how well coated they are. In the long term, the performance, durability and stability of any timber product, in exposed conditions is enhanced if appropriate physical protection from the elements, such as eaves overhangs or a veranda roof is provided.

All-natural timber will decay. To improve resistance to timber decay (rotting) suitable primers and paint finishes must be applied and regularly maintained throughout service life. As mentioned, the importance of correct pre-priming, of all exposed surfaces including overlaid/lap surfaces, edges and ends must be coated with an adequate number of coats before installation.

### **TREATED TIMBERS**

Commercial pressure impregnation of timber with an approved timber preservative, whilst giving long term protection against insect attack and timber decay, will not prevent colour change, surface checking of the timber, distortion or other effects of weathering.

Water repellents should be known brands, rather than homemade recipes, and should meet the requirements of Australian Standard AS1607 – 1974.

**WARNING:** Oil or mixtures containing a large proportion of linseed oil should be avoided as the oil encourages the growth of mould and fungi which will discolour the timber.

I / We ..... (Owners) acknowledge that we have read, understand and accept the advice provided on the Installation of Weatherboard / Timber Cladding.

This acknowledgement applies to the property situated at .....

.....

Owner(s) Signature(s) ..... ..

Dated this .....day of .....20 .....