

## Above ground, external applications

IRONOAK® is the utilisation of American Oak by ASH® combined with a deep penetrating Water Based Azole Protection (WBAP) by Tru-Core® to achieve a Hazard Class 3 (H3) for external, above ground durability. The treatment has minimal effect on the appearance of timber and can therefore be used to match the American Oak by ASH® range of products. H3 protects against insect attack (including termites), mould, rot and decay as per AS 1604.1.

To ensure the best performance of your IRONOAK® product, it is recommended that you follow these best practice guidelines:

## Expansion due to Treatment

An uptake in moisture content will result from pressure treatment and retention. This will impact boards by up to 2% of machined cover width. Timber in external environments should allow for this potential increase in moisture content.

## Painting, coating and sealing IRONOAK® products for optimum performance

- Coat IRONOAK® with a protective paint or stain and maintain according to the coating providers' instructions and relevant building codes.
- Before coating your IRONOAK® product, ensure that the timber is clean and dry. Dirt or grime may occur in treatment, transport or storage and handling so it may be necessary to clean the product with a wood or deck cleaner before coating. If the timber is not dry, make allowances for the timber to dry before applying a stain or coating.
- Any paint or stain used must be recommended by the coating manufacturer as being suitable for the proposed application and should be applied with compliance to the manufacturer's recommendations.
- It is best practice for all cut, mitred or docked ends and drilled holes to be sealed with a protective paint or stain to prevent moisture penetration of the end grain.
- Contact your IRONOAK® specialist for further advice if required.

## Storage and protection of IRONOAK® products

Timber moisture content can be an important product specification. Therefore, treated timber, like all kiln dried timber, must be stored under cover or be protected from rain and weather with an impervious plastic wrap. Keep the timber wrapped or covered during storage, transport and prior to use on the construction site.

As with any type of dry treated wood, it is recommended that durable bearers be used to create an air space at least 100 mm beneath the packets of timber.

## Other factors that can influence moisture content include:

- Exposure to direct sun and rain.
- Contact or close exposure to moisture laden porous materials such as concrete and bricks. Direct exposure to rain or water.
- Contact or direct exposure with hot elements (such as an oven), extreme environments, large north or west facing walls, windows and pools.
- Direct exposure to air conditioning.

## Good design and detailing of IRONOAK® products

Good detailing reduces IRONOAK's ongoing dependence on protective finishes. The following are a number of simple detailing and general design practices that will enhance the durability performance of IRONOAK® and in particular, exposed glue laminated IRONOAK® structures.

- Joists and bearers in weather exposed (above ground) decks are recommended to be installed and protected with a moisture barrier as per best practice deck building methods.
- The use of damp proof membranes is required where a laminated IRONOAK® beam may be in contact with porous concrete or masonry.
- Sealing the ends of laminated beams to prevent uneven movement in laminations as a result of moisture gain or loss. Refer to [MASSLAM Design Guide](#) for advice.

- Rounding or arising edges of boards to reduce the likelihood of coating failures on sharp edges. Incorporating drip edges or other devices that will provide a path for free moisture to drain away from the timber.
- Providing all laminated beams with adequate ventilation so that moisture contents within the beams do not exceed 15% and moisture gradients across the beams will not occur.

## Best practice joint detailing:

- Keeping horizontal contact areas to a minimum, with preference to self draining vertical surfaces. Ventilation in joint surfaces can be achieved by using spacers.
- Design with compatible fasteners which have adequate corrosion protection such as hot dipped galvanic coatings or stainless steel.
- Design with fixings that meet Australian Standards and do not cause end splits, staining or discolouration of timber.
- Design to ensure any moisture entering a joint can adequately drain away and does not become trapped. Make allowances for expansion/contraction in the joint design.
- Read the [MASSLAM Design Guide](#) for all GLT related advice.

Incorporating building overhangs and other structures to protect laminated beams from excessive moisture movement and sun exposure.

## IRONOAK® guarantee

IRONOAK® products are warranted to meet AS1604.1 H3 treatment and are covered by a 25 year warranty against decay and termites as outlined by Fishers Timber Preservation. For details and descriptions of the warranty, refer to the [Tru-Core® Wood For Life warranty](#)

### Disclaimer

Australian Sustainable Hardwoods (ASH) advises the guidelines are based on industry best practice and current information. They have been provided in good faith for the general guidance of IRONOAK® users. No assurance can be given that ASH's recommendations will be suitable for each and every possible situation outside of the Tru-Core® Wood For Life warranty.

ASH accepts no responsibility for the performance in accordance with these recommendations or otherwise. If in doubt, ASH recommends that all users obtain independent expert advice.