

Durability & Treatment



DATA SHEET

Overview

Durability and Treatment - Serviceability / Durability / Design Life of TimberLab Glulam

For the past 40 years, TimberLab has been supplying numerous and varied Glulam structures throughout Australasia, Pacific and into the Middle East and Asia. They have proven to be durable over this long time period and have been the material of choice in order to avoid the deterioration experienced in these conditions when steel and concrete are used. The structures have included beach resorts, pergolas, sports stadia, bridges and various community facilities; many of which are situated on beach front locations.



The greatest threat to durability and long term performance of timber structures comes from insect or fungal attack that induces break down of timber fibres and consequent rotting. This will occur in timber of high moisture content and no natural durability. All timber used in TimberLab Glulam is kiln dried to 12 - 14% moisture content and therefore produces a very stable material that significantly reduces the occurrence of splitting, twisting and other distortion often associated with unseasoned timber.



40-year-old bridge in treated Glulam. Situated in mangrove swamp subject to moisture and direct weathering.

No signs of any significant deterioration.

Because NZ Pine has a high sapwood content it is uniquely suitable for full penetration treatment. All material used in exterior situations is treated to a minimum of hazard class H3. This is carried out under strict government-controlled regulations and provides a 25 to 50 year warrantee with long term durability against insect and fungal attack.

In-ground Tests carried out by CSIRO in Australia have shown that treated NZ Pine has achieved a greater durability performance than some hardwood considered to be naturally durable. Their summary concludes in relation to the results on the NZ pine...it *“is generally performing far better at the present time than any of the untreated (but considered naturally durable) timber species in this test. The better performance of a well-treated nondurable species in direct comparison to that of the very best of the durable timber species in this study is a finding which should be of considerable commercial significance...”*

Source: *An in-ground natural durability field test of Australian timbers and exotic reference species. – VI Results after approximately 21 years exposure. By John D Thornton, Gary C Johnson and Nam-Ky Nguyen. CSIRO Division of Forest Products Melbourne Australia.*



Treated TimberLab Glulam Beams on Treated Timber Poles Support 200m Jetty



Cantilevered over seawater; treated Glulam beams support over water restaurant.

Maintenance of surface coatings for exterior Glulam, as with any other timber product, is necessary to minimise the possibility of any surface deterioration such as splitting or cracking due to weathering. A temporary penetrating weather resistant coating will be applied in the factory. If a stain is required, it is advisable to include this in the initial factory coating. Dark stains should be avoided as these attract heat and can cause timber to dry out excessively and initiate splitting. A good quality exterior penetrating coating system should be applied to exterior Glulam once on site to ensure that it maintains its visual appearance and its durability performance. Regular cleaning down and recoating should be considered every 18 - 24 months.