



Timber Properties

BALAU (Yellow Balau) (Selengan Batu #1)

Balau is a hardwood that originates from Malaysia but used commonly all over the world. It is in the last 20 years that it has become synonymous with hardwood construction in South Africa. Because of its density and durability it has become the premier choice for external and marine applications.

Description:

The heartwood is light brown to yellowish light brown gradually turning dark brown. The sapwood is lighter in colour than the heartwood. As the timber weathers it turns a silvery grey. The grain ranges from straight to spiraled and interlocked. The texture varies from fine to coarse and in general it is slightly coarse to coarse. Resin pockets do occur. Surface checking is common with balau as it is a "wet" timber, (because of its density it dries over a very long period of time and therefore cannot be accelerated with kiln drying) this is however common to all hardwoods in this category. The tree is commonly attacked by Pinhole Borer Beetle which leaves the timber with small and scattered pattern of small holes referred to as "Pin hole" this attack occurs only in tree form or when the log is freshly felled it is a characteristic of Balau and it does not affect the strength of the timber in any way. Knots can be present but they are usually sound. The timber is naturally very durable and does not accept treatment well. Acidic reactions occur when timber is in contact with ferrous metals, this is seen as black "ink like" markings, and these fade in time. Leaching may occur during the first wet season after installation but this gradually reduces after several seasons.

Nailing is difficult to impossible, and pre boring is essential when using screws. Workability with hand tools is difficult but it machines well. The use of stainless steel screws is advised. Shrinkage occurs so tolerance must be allowed for.

Uses:

Balau is suitable for all forms of heavy construction, marine construction, ship building (keels, keelsons and framework), piling, wharves and jetties, heavy duty beams and columns, bridge construction, railway sleepers, vehicle bodies, boat building, fenders, heavy duty pallets, telegraph posts and cross arms, posts, joists, rafters, decking and outdoor furniture.

NB: It is advised to use this timber in external applications only as it has a tendency to move in service, the use of traditional carpentry methods as well as mechanical fixing is recommended.

Physical Properties: (Averages)

Density: 1 000 kg /m³

Shrinkage Radial: 1.7 – 2.1%

Shrinkage Tangential: 3.5– 3.9%

Modulus of Elasticity: 20 100 n/mm²

Modulus of Rupture: 142 N/mm²

Compression Strength: Perpendicular to grain 9.79 N/mm²

Parallel to grain 76.00 N/mm²

Shear Strength: 15.00 N/mm²

As with all natural products colour will vary, the timber will have natural characteristics as described above. The onus is on the installer to secure the timber in the correct manner to avoid excessive movement in service.

This document is intended for general information purposes only.