Common name: MERBAU

Family: CAESALPINIACEAE

Scientific name(s): Intsia bijuga

Afzelia bijuga (synonymous)

Intsia palembanica

LOG DESCRIPTION WOOD DESCRIPTION

Diameter: from 60 to 120 cm Colour: Brown

Thickness of sapwood: from 5 to 8 cm Sapwood: Clearly demarcated

Floats: no Texture: Coarse

Durability in forest : No information available Grain: Straight or interlocked

Interlocked grain: Slight

Note: Heartwood orangey brown becoming dark red brown or dark brown with light. Presence of

yellow sulphur deposits.

# PHYSICAL PROPERTIES

### MECHANICAL PROPERTIES

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

	mean	standard deviation		mean	standard
Density *:	0.83 g/cm	3 0.05			deviation
Monnin hardness*:	8.8	2.3	Crushing strength *:	74 MPa	6
Coef of volumetric shrinkage	: 0.39 %	0.06	Static bending strength *:	115 MPa	13
Total tangential shrinkage:	4.4 %	0.9	Static bending strength .	113 MIF a	13
Total radial shrinkage:	2.7 %	0.7	Modulus of elasticity *:	15440 MPa	2269
Fibre saturation point:	24 %				
Stability:	stable		( *: at 12 % moisture content; 1 MPa = 1 N/mm2)		

#### NATURAL DURABILITY AND TREATABILITY

Fungi and termite resistance refers to end-uses under temperate climate.

Except for special comments on sapwood, natural durability is based on mature heartwood.

Sapwood must always be considered as non-durable against wood degrading agents.

Fungi: Class 1-2 very durable to durable

Dry wood borers: Durable; sapwood demarcated (risk limited to sapwood)

Termites: Class M - Moderately durable

Treatability: 4 - not permeable

Use class\*: 4 - in ground or fresh water contact

Note: This species is listed in the European standard NF EN 350-2.

It covers the use class 4, but presents a variable durability towards marine borers; its use under sea water is not recommended. Resistance to termites varies from "moderately durable" to

"durable".

According to the European standard NF EN 335, performance length might be modified by the

intensity of end-use exposition.

### MAIN LOCAL NAMES

Countries	Local names
Australia	KWILAU
China	KALABAU
Fiji	VESI
Indonesia	MERBAU
Magadascar	HINTSY
Malaysia (islands)	MIRABOW
Peninsular Malaysia	MERBAU
New Caledonia	KOHU
Papua New Guinea	KWILA
Philippines	IPIL
Philippines	IPIL LAUT
Thailand	LUM-PAW
Vietnam	GONUOC

\* ensured by natural

durability (according

EN standards).

#### **MERBAU**

### REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks:

In case of temporary humidification risk:

In case of permanent humidification risk:

Does not require any preservative treatment
Does not require any preservative treatment

DRYING		Possible drying schedule				
Drying rate: Risk of distortion: Risk of casehardening: Risk of checking: Risk of collapse:	Slow Slight risk No Slight risk No	M.C. (%)	Temperature (°C) dry-bulb wet-bulb		Air humidity (%)	
		30 25 20 15	42 42 48 48	41 39 43 43	94 82 74 74	

This schedule is given for information only and is applicable to thickness < 38 mm.

It must be used in compliance with the code of practice.

For thickness from 38 to 75 mm, the air relative humidity should be increased by 5 % at each step.

For thickness over 75 mm, a 10 % increase should be considered.

Note: Requires care in order to avoid surface cracks for thick boards.

### SAWING AND MACHINING

Blunting effect: Fairly high
Sawteeth recommended: Stellite-tipped
Cutting tools: Tungsten carbide

Peeling: No information available

Slicing: Good

Note: Sawblades tend to clog. Tendency to tearing on quartersawns. Variable silica content.

## **ASSEMBLING**

Nailing / Screwing: Good but pre-boring necessary

Gluing: Correct

Note: Tends to split when nailing.

### **END-USES**

Main known end-uses; they must to be implemented according to the code of practice.

Important remark: some end-uses are mentionned for information (traditional, regional or ancient end-uses).

Current furniture or furniture components

or furniture components

Snip building (planking and of

Flooring

Interior panelling Exterior joinery Interior joinery

Industrial or heavy flooring

Heavy carpentry Sliced veneer

Cabinetwork (high class furniture)

**Posts** 

Turned goods

Wood-ware

Tool handles (resilient woods)

Hydraulic works (fresh water) Bridges (parts in contact with water or ground)

Bridges (parts not in contact with water or ground)

Stairs (inside)

Musical instruments

Sleepers

Vehicle or container flooring

Sculpture Cooperage Ship building (planking and deck)

Boxes and crates