

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
Thickness of sapwood:	from 5 to 8 cm
Floats:	no
Durability in forest :	No information available
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 deviation
Density *:	0.83 g/cm ³	0.05	Crushing strength *:	74 MPa	6
Monnin hardness*:	8.8	2.3	Static bending strength *:	115 MPa	13
Coef of volumetric shrinkage:	0.39 %	0.06	Modulus of elasticity *:	15440 MPa	2269
Total tangential shrinkage:	4.4 %	0.9			
Total radial shrinkage:	2.7 %	0.7			
Fibre saturation point:	24 %				
Stability:	stable		(* : at 12 % moisture content ; 1 MPa = 1 N/mm ²)		

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	* ensured by natural durability (according EN standards).
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)	
Termites:	Class M - Moderately durable	
Treatability:	4 - not permeable	
Biological hazard class*:	4 - in ground or fresh water contact or high dampness	
Note:	This species is listed in the European standard NF EN 350-2. It covers the biological hazard 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".	

COUNTRIES - 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

MERBAU

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks:	Does not require any preservative treatment
In case of temporary humidification risk:	Does not require any preservative treatment
In case of permanent humidification risk:	Does not require any preservative treatment

DRYING

Possible drying schedule

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

ASSEMBLING

Nailing / Screwing:	Good but pre-boring necessary
Gluing:	Correct
Note:	Tends to split in nailing.

END-USES

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

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

Current furniture or furniture components	Sculpture
Flooring	Cooperage
Interior panelling	Ship building (planking and deck)
Exterior joinery	Boxes and crates
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	
