

Common name:	MERAWAN
Family:	DIPTEROCARPACEAE
Scientific name(s):	Hopea griffithii Hopea spp.* (note)
Note:	*Hopea density < 0.85. The most dense species are marketed under the name of "GIAM".

LOG DESCRIPTION		WOOD DESCRIPTION	
Diameter:	from 60 to 120 cm	Colour:	Yellow brown
Thickness of sapwood:	from 5 to 7 cm	Sapwood:	Not clearly demarcated
Floats:	yes	Texture:	Medium
Durability in forest :	Moderate (treatment recommended)	Grain:	Straight or interlocked
		Interlocked grain:	Slight
Note:	Some logs are not buoyant. Yellow brown to chocolate reddish brown wood with an occasional dark striping. Texture is fine to medium.		

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	
Density *:	0.70 g/cm ³		mean
Monnin hardness*:	4.0		standard deviation
Coef of volumetric shrinkage:	0.47 %	Crushing strength *:	59 MPa
Total tangential shrinkage:	6.6 %	Static bending strength *:	102 MPa
Total radial shrinkage:	3.2 %	Modulus of elasticity *:	15600 MPa
Fibre saturation point:	20 %		
Stability:	Moderately 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 2-3 durable to moderately durable	* ensured by natural durability (according EN standards).
Dry wood borers:	Heartwood durable but sapwood not clearly demarcated	
Termites:	Class S - Susceptible	
Treatability:	4 - not permeable	
Use class*:	3 - not in ground contact, outside	
Note:	Hopea spp. with a density < 0.85 (GIAM) have a better resistance to fungi. 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
Cambodia	KOKI
Indonesia	CENGAL
Indonesia	MERAWAN
Malaysia (islands)	GAGIL
Malaysia (islands)	MERAWAN
Myanmar	THINGAN
Papua New Guinea	LIGHT HOPEA
Philippines	MANGGACHAPUI
Thailand	TAKIEN
Vietnam	SAO
Germany	MERAWAN
France	MERAWAN
Italia	MERAWAN
United Kingdom	MERAWAN

MERAWAN

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:	Use not recommended

DRYING

Possible drying schedule

Drying rate:	Slow	Temperature (°C)			Air humidity (%)
		M.C. (%)	dry-bulb	wet-bulb	
Risk of distortion:	High risk	Green	50	47	84
Risk of casehardening:	No	40	50	45	75
Risk of checking:	High risk	30	55	47	67
Risk of collapse:	No	20	70	55	47
		15	75	58	44

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.

SAWING AND MACHINING

Blunting effect:	Normal
Sawteeth recommended:	Stellite-tipped
Cutting tools:	Tungsten carbide
Peeling:	Good
Slicing:	Not recommended or without interest

ASSEMBLING

Nailing / Screwing:	Poor
Gluing:	Correct
Note:	Tends to split when nailing or screwing. Nails holding is poor.

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).

Note:	Resistant to acids.
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Wood frame house
Light carpentry
Veneer for back or face of plywood
Veneer for interior of plywood
Flooring
Interior joinery
Stairs (inside)
Current furniture or furniture components
Cooperage
Exterior joinery
Vehicle or container flooring
Sleepers
Fiber or particle boards
Turned goods
