

Family: ANACARDIACEAE (angiosperm)

Scientific name(s): Mangifera spp.* (voir note)

Commercial restriction: no commercial restriction

Note: * Mangifera spp.: origins Asia-Oceania.

WOOD DESCRIPTION

Color: light brown
Sapwood: not clearly demarcated
Texture: coarse
Grain: undulating
Interlocked grain: absent
Note: Wide sapwood.

Wood light brown slightly pink. Heartwood with grey or dark brown veins in some logs.

LOG DESCRIPTION

Diameter: from 90 to 120 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

PHYSICAL PROPERTIES

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

	<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,76	0,12
Monnin hardness *:	3,7	0,7
Coeff. of volumetric shrinkage:	0,54 %	0,10 %
Total tangential shrinkage (TS):	6,1 %	0,9 %
Total radial shrinkage (RS):	4,2 %	0,8 %
TS/RS ratio:	1,5	
Fiber saturation point:	25 %	
Stability: moderately stable		

Note: Physical and mechanical properties have a great variability.

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	71 MPa	15 MPa
Static bending strength *:	82 MPa	25 MPa
Modulus of elasticity *:	12250 MPa	213 MPa

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

Musical quality factor: 91,3 measured at 2117 Hz

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.

E.N. = Euro Norm

Funghi (according to E.N. standards): class 5 - not durable

Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)

Termites (according to E.N. standards): class S - susceptible

Treatability (according to E.N. standards): class 1 - easily permeable

Use class ensured by natural durability: class 1 - inside (no dampness)

Species covering the use class 5: No

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: requires appropriate preservative treatment

In case of risk of temporary humidification: requires appropriate preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: rapid to normal

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: no

Note: Risk of coloration during drying.

Possible drying schedule: 6

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	42	41	94
50	48	43	74
30	54	46	63
20	60	51	62
15	60	51	62

This schedule is given for information only and is applicable to thickness lower or equal to 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: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

Note: Sometimes presence of tension wood and tendency to woolliness. Careful sanding and filling are necessary. Veneers quite brittle.

ASSEMBLING

Nailing / screwing: good

Gluing: correct

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to MGR grading rules (2009)

Possible grading: Prime, Select, Standard, Serviceable, Utility

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)

Thickness < 14 mm : M.4 (easily inflammable)

Euroclasses grading: D s2 d0

Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

END-USES

Interior joinery

Veneer for interior of plywood

Moulding

Heavy carpentry

Sliced veneer

Formwork

Interior panelling

Veneer for back or face of plywood

Flooring

Turned goods

Current furniture or furniture components

Boxes and crates

Note: Wood with grey or dark brown veins may be used for decorative sliced veneer.

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
India	MANGGA	India	MANGO
Indonesia	MEMBACANG	Peninsular Malaysia	ASAM
Malaysia (islands)	MACHANG	Malaysia (islands)	SEPAM
Myanmar	MANGOWOOD	Myanmar	THAYET
Pakistan	MANGO	Papua New Guinea	MANGO
Philippines	AILAI	Philippines	ASAI
Philippines	PAHUTAN	Solomon Islands	MA-MUANG-PA
Thailand	MA-MUANG-PA	Thailand	PAMUTAN
Vietnam	XOAI	France	MANGUIER
United Kingdom	MANGOWOOD		

