Manil / Manni*

Family. Clusiaceae

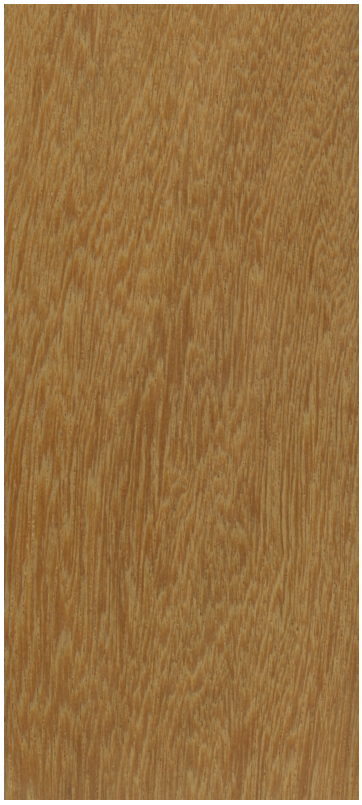
Botanical Name(s).

Symphonia globulifera

Continent. Latin America

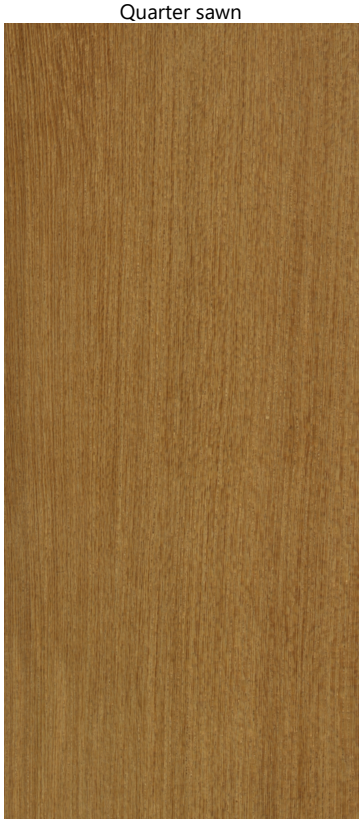
CITES. This species is not listed in the CITES Appendices (Washington Convention 2023).

Notes. This species is also found in Africa (OSSOL in Gabon).



Flat sawn

Quarter sawn



Description of logs

Diameter. From 50 to 80 cm

Thickness of sapwood. From 4 to 8 cm

Floats. No

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Yellow brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Straight

Interlocked grain. Absent

Notes. Wood light brown to yellow brown.

Physics and mechanics

The properties indicated are for mature wood. These properties may vary significantly depending on the origin and growing conditions of the wood.

Property	Average value
Specific gravity[1]	0.71
Monnin hardness[1]	3.3
Coefficient of volumetric shrinkage	0.61 % per %
Total tangential shrinkage (St)	10.1 %
Total radial shrinkage (Sr)	4.8 %
Ratio St/Sr	2.1
Fibre saturation point	29 %
Thermal conductivity (λ)	0.24 W/(m.K)
Lower heating value	18,400 kJ/kg
Crushing strength[1]	58 MPa
Static bending strength[1]	104 MPa
Modulus of elasticity[1]	15,630 MPa

[1] *At 12 % moisture content, with 1 MPa = 1 N/mm*

Natural durability and preservation

Resistance to fungi. Class 3 - moderately durable

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Resistance to dry wood borers. Class D - durable (sapwood demarcated, risk limited to sapwood)

Resistance to termites. Class S - susceptible

Treatability. Class 3 - poorly permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Notes. Treatability seems rather easy with oily-type preservative products and difficult with saline-type preservative products.

Requirement of a preservative treatment

Against dry wood borer. Does not require any preservative treatment

In case of temporary humidification. Requires appropriate preservative treatment

In case of permanent humidification. Use not recommended

Drying

Drying rate. Normal

Risk of distorsion. High risk

Risk of casehardening. Yes

Risk of checking. High risk

Risk of collapse. No known specific risk

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	50	87	17.0
Prewarm 2	4	> 50	50	86	16.5
Drying		> 50	53	85	15.7
		50 - 40	53	82.0	14.6
		40 - 35	54	78.0	13.4
		35 - 30	55	77.0	12.9
		30 - 27	57	73.0	11.9
		27 - 24	58	68.0	10.7
		24 - 21	60	61.0	9.3
		21 - 18	62	52.0	7.9
		18 - 15	64	43.0	6.6
		15 - 12	65	39.0	6.0
		12 - 9	65	31.0	5.0
		9 - 6	65	28.0	4.5
Conditioning	8		58	(3)	(2)
Cooling	(1)		Stop	(3)	(2)

(1)) Cooling: until the temperature inside the kiln no longer exceeds external temperature by more than 30 °C.

(2) UGL = final H% x 0,8 to 0,9.

(3) Subtract RH from the UGL determined in (2) and temperature, using the Hailwood-Horrobin equation.

Sawing and machining

Blunting effect. Normal

Sawteeth recommended. Ordinary or alloy steel

Cutting tools. Ordinary

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Peeling. Good

Slicing. Good

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. Risks of splitting when nailing.

Commercial grading

Appearance grading for sawn timbers.

According to ATIBT grading rules, possible grade: FAS (First And Second), n°1 Common and select, n°2 Common

Visual grading for structural applications

According to French standard NF B 52-001-1 (2018), strength class D35 can be provided by visual grading.

Fire safety

Conventional French grading.

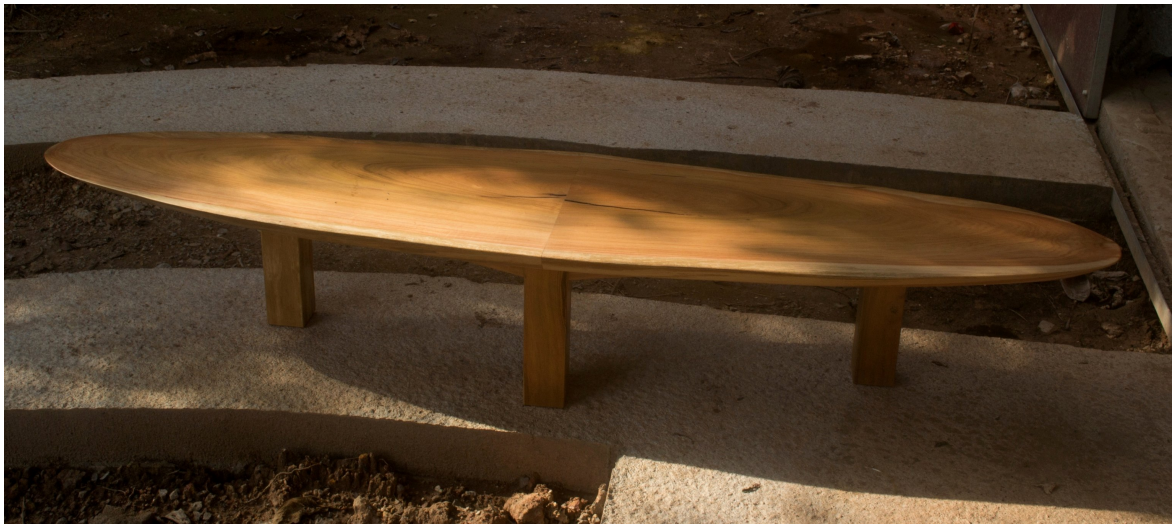
Thickness > 14 mm: M3 (moderately inflammable)
Thickness < 14 mm: M4 (easily inflammable)

Euroclasses grading. D-s2, d0

Default grading for solid wood, according to requirements of European standard EN 14081-1+A1 (August 2019). It concerns structural graded timber in vertical uses and ceiling with mean density upper 0.35 and thickness upper 22 mm.

End-uses

- Boxes and crates
- Cooperage
- Current furniture or furniture components
- Flooring
- Heavy carpentry
- Interior joinery
- Interior panelling
- Moulding
- Pulp
- Sliced veneer
- Veneer for back or face of plywood
- Wood frame house
- Wood-ware



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Coffee table in Manil marécage, by Copeaux and Co, Sinnamary (French Guiana).

Main local names

Country	Local name
Bolivia	Azufre
Bolivia	Brea amarilla
Brazil	Anani
Brazil	Canadi
Brazil	Mani
Colombia	Azufre
Colombia	Machare
Ecuador	Machare
Ecuador	Puenga
Ecuador	Zaputi
French Guiana	Manil
French Guiana	Manil marécage
Guyana	Manni
Peru	Azufre
Peru	Brea-caspi
Suriname	Mani
Suriname	Mataki
Trinidad and Tobago	Mangue
United States of America (importated tropical timber)	Boarwood
Venezuela	Mani
Venezuela	Paraman
Venezuela	Peramancillo

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