

## Mansonia

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Family. Malvaceae

Botanical Name(s).

*Mansonia altissima*

Continent. Africa

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

Notes. Also called MANSONIA.

### Description of logs

Diameter. From 40 to 70 cm

Thickness of sapwood. From 2 to 5 cm

Floats. No

Log durability. Moderate (treatment recommended)

### Description of wood

Colour reference. Brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Straight

Interlocked grain. Absent

Notes. Logs are almost floatable. Wood yellowish brown to dark grey brown with purplish glints. Veins more or less visible.

### 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 <sup>1</sup>	0.66
Monnin hardness <sup>1</sup>	3.8
Coefficient of volumetric shrinkage	0.44 % per %
Total tangential shrinkage (St)	7.4 %
Total radial shrinkage (Sr)	4.6 %
Ratio St/Sr	1.6
Fibre saturation point	28 %
Thermal conductivity (λ)	0.22 W/(m.K)
Lower heating value	
Crushing strength <sup>1</sup>	60 MPa
Static bending strength <sup>1</sup>	110 MPa
Modulus of elasticity <sup>1</sup>	13,620 MPa

<sup>1</sup> At 12 % moisture content, with 1 MPa = 1 N/mm

### Natural durability and preservation



Quarter sawn



Half-quarter sawn

Resistance to fungi. Class 1 - very durable

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

Resistance to termites. Class D - durable

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 3 - not in ground contact, outside

Notes. Although MANSONIA is mentioned in the natural durability class 1 towards fungi (very durable) in the standard NF EN 350 (2016), it is important to know that it is sensible to white rot "Coriolus versicolor" attacks, hence, its classification in class 2 (durable). According to the European standard NF EN 335 (2013), performance length might be modified by the intensity of end-use exposition.

### Requirement of a preservative treatment

Against dry wood borer. Does not require any preservative treatment

In case of temporary humidification. Does not require any preservative treatment

In case of permanent humidification. Use not recommended

### Drying

Drying rate. Normal

Risk of distorsion. No risk or very slight risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
<b>Prewarm 1</b>		> 50	55	84	15.5
<b>Prewarm 2</b>	3	> 50	57	83	15.0
<b>Drying</b>		> 50	60	76	12.5
		50 - 40	60	73.0	11.6
		40 - 35	60	69.0	10.7
		35 - 30	60	62.0	9.5
		30 - 27	63	55.0	8.2
		27 - 24	64	50.0	7.5
		24 - 21	65	46.0	6.9
		21 - 18	65	39.0	6.0
		18 - 15	68	32.0	5.0
		15 - 12	70	29.0	4.5
		12 - 9	70	25.0	4.0
		9 - 6	70	24.0	3.9
<b>Conditioning</b>	6		63	(3)	(2)
<b>Cooling</b>	(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

Peeling. Good

Slicing. Good

Notes. Sawdust may cause dermatitis or mucosa irritation.

## Assembling

Nailing and screwing. Good

## Commercial grading

Appearance grading for sawn timbers.

According to the ATIBT grading rules (2017), the main choices are: FAS (First And Second), n°1 Common and select, n°2 Common (see details of these rules on the ATIBT website).

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

- Cabinetwork (high class furniture)
- Exterior joinery
- Flooring
- Glued laminated
- Interior joinery
- Interior panelling
- Light carpentry
- Moulding
- Resistant to one or several acids
- Rolling shutters
- Shingles
- Ship building (planking and deck)
- Sliced veneer
- Turned goods
- Veneer for back or face of plywood

## Main local names

Country	Local name
Cameroon	Koul
Central African Republic	Koul
Congo	Guissépa
Côte d'Ivoire	Bété

France (importated tropical timber)

Ghana

Ghana

Nigeria

United Kingdom (importated tropical timber)

Bété

Aprono

Mansonia

Ofun

Mansonia