

Vésámбата

Family. Phyllanthaceae (Euphorbiaceae)

Botanical Name(s).

Oldfieldia africana

Continent. Africa

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

Description of logs

Diameter. From 80 to 100 cm

Thickness of sapwood. From 4 to 6 cm

Floats. No

Log durability. Good

Description of wood

Colour reference. Dark brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Straight to entangled

Interlocked grain. Absent

Notes. Sapwood pale red. Heartwood red-brown with frequent purple tinge.

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	0.91
Monnin hardness ¹	8.1
Coefficient of volumetric shrinkage	0.53 % per %
Total tangential shrinkage (St)	9.5 %
Total radial shrinkage (Sr)	5.5 %
Ratio St/Sr	1.7
Fibre saturation point	28 %
Thermal conductivity (λ)	0.29 W/(m.K)
Lower heating value	
Crushing strength ¹	77 MPa
Static bending strength ¹	138 MPa
Modulus of elasticity ¹	18,000 MPa

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

Natural durability and preservation

Resistance to fungi. Class 1 - very durable



Quarter sawn



Flat sawn

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 4 - in ground or fresh water contact

Notes. This species naturally covers the use class 5 (wood permanently or regularly submerged in salt water, sea water or brackish water) due to its high hardness. 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. Does not require any preservative treatment

Drying

Drying rate. Slow

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	40	86	17.0
Prewarm 2	4	> 50	43	85	16.5
Drying		> 50	45	83	15.7
		50 - 40	45	80.0	14.6
		40 - 35	45	77.0	13.8
		35 - 30	45	74.0	12.9
		30 - 27	47	69.0	11.5
		27 - 24	49	61.0	9.9
		24 - 21	50	52.0	8.4
		21 - 18	53	48.0	7.7
		18 - 15	56	41.0	6.6
		15 - 12	59	36.0	5.9
		12 - 9	61	30.0	5.0
		9 - 6	65	29.0	4.7
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. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Not recommended or without interest

Slicing. Not recommended or without interest

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. High specific gravity: gluing must be especially performed in compliance with the code of practice.

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

No visual grading for structural applications

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

- Arched goods
- Bridges (parts in contact with water or ground)
- Bridges (parts not in contact with water or ground)
- Decking
- Exterior joinery
- Exterior panelling
- Flooring
- Hydraulic works (fresh water)
- Hydraulic works (seawater)
- Indoor staircases
- Industrial or heavy flooring
- Interior joinery
- Ship building (planking and deck)
- Sleepers
- Stringed instruments (bow)
- Turned goods

Notes. To be used more widely due to very good technological properties.

Main local names

Country	Local name
Congo	Vésámbata
Côte d'Ivoire	Dantoué
Liberia	Kpaoli
Liberia	Pauli
Sierra Leone	Kpaoli
Sierra Leone	Pauli
Sierra Leone	Turtosa