Alumbi

Half quarter sawn

Quarter sawn

Family. Leguminosae (Caesalpiniaceae)

Botanical Name(s).

Julbernardia seretii

Continent. Africa

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

Description of logs

Diameter. From 80 to 90 cm

Thickness of sapwood. From 5 to 15 cm

Floats. No

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Red brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Straight to entangled

Interlocked grain. Slight

Notes. Sapwood yellow. Heartwood red-brown, sometimes with brown or yellow stripes.

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]	0.74
Monnin hardness[1]	4.5
Coefficient of volumetric shrinkage	0.45 % per %
Total tangential shrinkage (St)	7.9 %
Total radial shrinkage (Sr)	4.4 %
Ratio St/Sr	1.8
Fibre saturation point	29 %
Thermal conductivity (λ)	0.24 W/(m.K)
Lower heating value	
Crushing strength[1]	67 MPa
Static bending strength[1]	109 MPa
Modulus of elasticity[1]	18,060 MPa

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

Natural durability and preservation

Resistance to fungi. Class 4 - poorly durable

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Resistance to dry wood borers. Class S - susceptible (risk in all the wood)

Resistance to termites. Class S - susceptible

Treatability. Class 3-4 - poorly or not permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Requirement of a preservative treatment

Against dry wood borer. Requires appropriate preservative treatment

In case of temporary humidification. Use not recommended

In case of permanent humidification. Use not recommended

Drying

Drying rate. Normal

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes.

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

Peeling. Bad

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Slicing. Good

Notes. Very fine surface after sanding.

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

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

- Cabinetwork (high class furniture)
- Current furniture or furniture components
- Flooring
- Heavy carpentry
- Indoor staircases
- Interior joinery
- Interior panelling
- Light carpentry
- Sliced veneer
- Wood frame house

Main local names

Country	Local name
Democratic Republic of the Congo	Alumbi
Democratic Republic of the Congo	Alumbi
Democratic Republic of the Congo	Bokoko
Democratic Republic of the Congo	Kua
Democratic Republic of the Congo	Mubangu
Equatorial Guinea	Nfum
Gabon	Mbangandourgou

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