

Anzèm / nténé

Family. Leguminosae (Caesalpiniaceae)

Botanical Name(s).

Copaifera religiosa

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 10 to 15 cm

Floats. Yes

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Red brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Sapwood whitish to pale pink. Heartwood pale pink brown to reddish brown, copper tinge, with darker veining. Frequent resin exudation.

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	0.58
Monnin hardness ¹	2.6
Coefficient of volumetric shrinkage	0.33 % per %
Total tangential shrinkage (St)	7.0 %
Total radial shrinkage (Sr)	5.3 %
Ratio St/Sr	1.3
Fibre saturation point	33 %
Thermal conductivity (λ)	0.20 W/(m.K)
Lower heating value	
Crushing strength ¹	47 MPa
Static bending strength ¹	81 MPa
Modulus of elasticity ¹	10,340 MPa

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

Natural durability and preservation



Half-quarter sawn



Flat sawn

Resistance to fungi. Class 5 - not durable

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 1 - inside (no dampness)

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. Rapid

Risk of distortion. No risk or very slight risk

Risk of casehardening. No known specific risk

Risk of checking. No risk or very slight risk

Risk of collapse. No known specific risk

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	50	86	16.5
Prewarm 2	3	> 50	52	85	16.0
Drying		> 50	55	82	14.7
		50 - 40	55	80.0	13.8
		40 - 35	55	75.0	12.6
		35 - 30	56	73.0	12.0
		30 - 27	58	67.0	10.5
		27 - 24	60	58.0	8.9
		24 - 21	62	50.0	7.5
		21 - 18	64	45.0	6.8
		18 - 15	65	37.0	5.7
		15 - 12	65	34.0	5.3
		12 - 9	65	28.0	4.5
		9 - 6	65	24.0	4.0
Conditioning	6		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. Good

Slicing. Good

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

- Blockboard
- Boxes and crates
- Current furniture or furniture components
- Flooring
- Interior joinery
- Interior panelling
- Moulding
- Veneer for back or face of plywood
- Veneer for interior of plywood
- Wood frame house

Notes. Possible confusion with Mutényé as logs (similar bark) and with Ghéombi as sawn timber. Substitute for Walnut.

Main local names

Country	Local name
Congo	N'téné
Democratic Republic of the Congo	Bengi
Gabon	Anzèm rouge