

East african bombax

Family. Malvaceae

Botanical Name(s).

Rhodognaphalon brevicuspe

Bombax brevicuspe (synonymous)

Bombax chevalieri (synonymous)

Rhodognaphalon schumannianum

Bombax rhodognaphalon (synonymous)

Continent. Africa

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

Description of logs

Diameter. From 60 to 100 cm

Thickness of sapwood. From 8 to 10 cm

Floats. Yes

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Light brown

Sapwood. Clearly demarcated

Texture. Coarse

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Heartwood yellowish brown to light red brown with slightly darker veins.

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	0.46
Monnin hardness ¹	1.4
Coefficient of volumetric shrinkage	0.40 % per %
Total tangential shrinkage (St)	8.2 %
Total radial shrinkage (Sr)	4.3 %
Ratio St/Sr	1.9
Fibre saturation point	38 %
Thermal conductivity (λ)	0.16 W/(m.K)
Lower heating value	18,240 kJ/kg
Crushing strength ¹	35 MPa
Static bending strength ¹	58 MPa
Modulus of elasticity ¹	8,760 MPa

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



Quarter sawn



Half-quarter sawn

Natural durability and preservation

Resistance to fungi. Class 5 - not durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 1 - easily permeable

Use class ensured by natural durability.

Class 1 - inside (no dampness)

Notes. This species is listed in the European standard NF EN 350 (2016).

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. Rapid

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes. Initial surface drying prior to kiln drying is recommended in order to reduce defects. Tendency to warping on backsawn.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	55	84	15.5
Prewarm 2	3	> 50	57	83	15.0
Drying		> 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
Conditioning	6		63	(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. Not recommended or without interest

Notes. Sometimes fuzzy surface.

Assembling

Nailing and screwing. Poor

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
- Fiber or particle boards
- Interior joinery
- Interior panelling
- Moulding
- Turned goods
- Veneer for back or face of plywood
- Veneer for interior of plywood

Notes. Substitute for OKOUME (*Aucoumea klaineana*).

Main local names

Country	Local name
Benin	Kpatin dehun
Cameroon	Ovong
Congo	N'démo
Côte d'Ivoire	Kondroti
Gabon	Alone
Gabon	Ogumalanga
Ghana	Bombax

Mozambique

Mozambique

Nigeria

Tanzania

United Kingdom (importated tropical timber)

Meguza

Mungusa

Awori

Mfume

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