Missanda

Flat sawn

Quarter sawn

Family. Erythroxylaceae

Botanical Name(s).

Erythrophleum ivorense
Erythrophleum suaveolens

Continent. Africa

CITES.

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

Description of logs

Diameter. From 60 to 90 cm

Thickness of sapwood. From 3 to 6 cm

Floats. No

Log durability. Good

Description of wood

Colour reference. Brown

Sapwood. Clearly demarcated

Texture. Coarse

Grain. Interlocked

Interlocked grain. Marked

Notes. Wood orangey yellow brown to reddish brown. Tali from East Africa has a lighter colour.

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]	9.2
Coefficient of volumetric shrinkage	0.57 % per %
Total tangential shrinkage (St)	8.4 %
Total radial shrinkage (Sr)	5.1 %
Ratio St/Sr	1.6
Fibre saturation point	26 %
Thermal conductivity (λ)	0.29 W/(m.K)
Lower heating value	18,280 kJ/kg
Crushing strength[1]	79 MPa
Static bending strength[1]	128 MPa
Modulus of elasticity[1]	19,490 MPa

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

Natural durability and preservation

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 4 - in ground or fresh water contact

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

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

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)		Arrêt	(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. Fairly high

Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Bad

Slicing. Not recommended or without interest

Notes. Requires power. Difficulties due to interlocked grain in planing.

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. Avoid direct contact with nails, screws and other iron fasteners due to risks of local chemical degradation of wood and iron, combined with blackish stains.

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).

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

- Bridges (parts in contact with water or ground)
- Bridges (parts not in contact with water or ground)
- Decking
- Exterior joinery
- Heavy carpentry
- Hydraulic works (fresh water)
- Industrial or heavy flooring
- Poles
- Sleepers
- Stakes

- Vehicle or container flooring

Notes. Can be used as a substitute for EKKI (*Lophira alata*).

Bridge pavement

Main local names

Country	Local name
Cameroon	Élone
Congo	N'kassa
Côte d'Ivoire	Alui
Côte d'Ivoire	Tali
Democratic Republic of the Congo	Kassa
Equatorial Guinea	Elondo
Gabon	Éloun
Ghana	Potrodom
Guinea-Bissau	Mancone
Mozambique	Missanda
Nigeria	Erun
Nigeria	Sasswood
Senegal	Tali
Sierra Leone	Gogbei
Tanzania	Mwavi
United Kingdom (importated tropical timber)	Missanda
Zambia	Muave