

Grenadillo / Grenadille d'Afrique

Family. Leguminosae (Fabaceae)

Botanical Name(s).

Dalbergia melanoxylon

Continent. Africa

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

Description of logs

Diameter. From 30 to 60 cm

Thickness of sapwood. From 1 to 2 cm

Floats. No

Log durability. Good

Description of wood

Colour reference. Black

Sapwood. Clearly demarcated

Texture. Fine

Grain. Straight

Interlocked grain. Absent

Notes. Sapwood yellowish white. Heartwood dark purple-brown with black streaks. Typical scent of rose.

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	1.29
Monnin hardness ¹	22.1
Coefficient of volumetric shrinkage	0.36 % per %
Total tangential shrinkage (St)	4.8 %
Total radial shrinkage (Sr)	2.9 %
Ratio St/Sr	1.7
Fibre saturation point	25 %
Thermal conductivity (λ)	0.40 W/(m.K)
Lower heating value	
Crushing strength ¹	72 MPa
Static bending strength ¹	162 MPa
Modulus of elasticity ¹	20,250 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 3-4 - poorly or 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 (end-uses in marine environment or in brackish water) due to its high hardness. However, this characteristic has no interest for this precious species.

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. No risk or very slight 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	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. High

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

Commercial grading

Appearance grading for sawn timbers.

No conventional grading rules for this cabinetwork species. Grading according to final uses.

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)
- Musical instruments
- Sculpture
- Tool handles (resilient woods)
- Turned goods
- Wind instruments
- Wood-ware

Notes. End-uses similar to those of Ebony

Main local names

Country	Local name
Chad	Tabum
Democratic Republic of the Congo	Kafundula
Ethiopia	Zebe
Ethiopia	Zobbi
Kenya	Kikwaju
Kenya	Mpingo
Kenya	Poyi
Mali	Farakalay
Mozambique	Grenadillo
Mozambique	Pau preto
Senegal	Dialambame
Senegal	Ebène
South Africa	Driedoring

South Africa
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South Africa
South Africa
South Africa
Uganda
Zambia
Zambia
Zambia
Zambia
Zambia
Zambia
Zambia
Zambia
Zambia
Zimbabwe
Zimbabwe

Ebbehout
Mokelete
Sebrahout
Swartdriedoring
Umbambangwe
Motangu
Chinsale
Kasalusalu
Mfwankomo
Mkelete
Mkumudwe
Msalu
Mukelete
Musonkomo
Murwiti
Pulupulu