Berlinia

Quarter sawn

Flat sawn

Family. Leguminosae (Caesalpiniaceae)

Botanical Name(s).

Berlinia bracteosa
Berlinia confusa
Berlinia grandiflora
Berlinia p.p.

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 10 to 15 cm

Floats. No

Log durability. Moderate (treatment recommended)

Description of wood

Colour reference. Pinkish brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Presence of purple or dark brown veins. Frequent resin canals.

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]	0.70
Monnin hardness[1]	4.0
Coefficient of volumetric shrinkage	0.53 % per %
Total tangential shrinkage (St)	7.8 %
Total radial shrinkage (Sr)	3.8 %
Ratio St/Sr	2.1
Fibre saturation point	28 %
Thermal conductivity (λ)	0.23 W/(m.K)
Lower heating value	19,460 kJ/kg
Crushing strength[1]	57 MPa
Static bending strength[1]	93 MPa
Modulus of elasticity[1]	12,870 MPa

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

Notes. Physical and mechanical properties are very variable according to the different EBIARA species.

Last update date: 03/25/2024

Natural durability and preservation

Resistance to fungi. Class 3 - moderately durable

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

Resistance to termites. Class M - moderately durable

Treatability. Class 3 - poorly permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

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. Normal to slow

Risk of distorsion. 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	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

Last update date: 03/25/2024

Peeling. Good

Slicing. Good

Assembling

Nailing and screwing. Good but pre-boring necessary

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
- Exterior joinery
- Exterior panelling
- Flooring
- Formwork
- Indoor staircases
- Interior joinery
- Interior panelling
- Light carpentry
- Sliced veneer
- Turned goods
- Veneer for back or face of plywood
- Wood-ware

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Small stylized polished sculpture (Gabon)
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Main local names

Country	Local name
Angola	M'possa
Benin	Bagbé
Cameroon	Abem
Cameroon	Essabem
Congo	M'possa
Côte d'Ivoire	Melegba
Côte d'Ivoire	Pocouli
Democratic Republic of the Congo	M'possa
Gabon	Ébiara
Germany (importated tropical timber)	Berlinia
Ghana	Berlinia
Nigeria	Ekpogoi
Sierra Leone	Sarkpei
United Kingdom (importated tropical timber)	Berlinia

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