

Eyoun

Family. Leguminosae (Caesalpiaceae)

Botanical Name(s).

Dialium aubrevillei

Dialium bipidense

Dialium dinklagei

Dialium pachyphyllum

Dialium p.p.

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 4 to 8 cm

Floats. No

Log durability. Good

Description of wood

Colour reference. Red brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Straight to entangled

Interlocked grain. Marked

Notes. Light pinkish brown to brown or red brown, sometimes very dark.

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	0.94
Monnin hardness ¹	10.3
Coefficient of volumetric shrinkage	0.50 % per %
Total tangential shrinkage (St)	8.7 %
Total radial shrinkage (Sr)	4.9 %
Ratio St/Sr	1.8
Fibre saturation point	28 %
Thermal conductivity (λ)	0.30 W/(m.K)
Lower heating value	19,510 kJ/kg
Crushing strength ¹	90 MPa
Static bending strength ¹	162 MPa
Modulus of elasticity ¹	22,700 MPa

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



Quarter sawn



Flat sawn

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). Informations given in the "Natural durability" and "Requirement of a preservative treatment" parts are relative to the behaviours of most species of the genus. Some origins of some species, in particular *Dialium pachyphyllum* and *Dialium aubrevillei*, could show less durable (durability class 3 or 4). 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	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. Good

Assembling

Nailing and screwing. Good but pre-boring necessary

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

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

- Bridges (parts in contact with water or ground)
- Decking
- Exterior joinery
- Exterior panelling
- Flooring
- Hydraulic works (fresh water)
- Industrial or heavy flooring
- Sleepers
- Sliced veneer
- Turned goods
- Vehicle or container flooring
- Wood frame house

Main local names

Country	Local name
Cameroon	M'fan
Cameroon	Mfang
Congo	Penzi
Côte d'Ivoire	Afambéou
Côte d'Ivoire	Kofina

Democratic Republic of the Congo
Democratic Republic of the Congo
Gabon
Gabon
Guinea-Bissau
Liberia
Liberia
Liberia
Mozambique

Bongola
Kasudu
Éyoum
Omvong
Pau veludo
Ciania
Gbelle-flu
Gia kaba
Ziba