

Ekop

Family. Leguminosae (Caesalpiaceae)

Botanical Name(s).

Tetraberlinia bifoliolata

Berlinia bifoliolata (synonymous)

Tetraberlinia longiracemosa

Tetraberlinia tubmaniana

Tetraberlinia p.p.

Continent. Africa

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

Notes. EKABA is often confused with ANDOUNG (*Monopetalanthus* spp.).

Description of logs

Diameter. From 70 to 100 cm

Thickness of sapwood. From 2 to 12 cm

Floats. Yes

Log durability. Moderate (treatment recommended)

Description of wood

Colour reference. Pinkish brown

Sapwood. Not clearly demarcated

Texture. Medium

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Possible presence of wind shakes.

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	0.62
Monnin hardness ¹	3.0
Coefficient of volumetric shrinkage	0.50 % per %
Total tangential shrinkage (St)	7.8 %
Total radial shrinkage (Sr)	4.1 %
Ratio St/Sr	1.9
Fibre saturation point	27 %
Thermal conductivity (λ)	0.21 W/(m.K)
Lower heating value	20,410 kJ/kg
Crushing strength ¹	56 MPa
Static bending strength ¹	90 MPa
Modulus of elasticity ¹	13,760 MPa

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



Quarter sawn



Flat sawn

Notes. *T. bifoliolata* has lower physical and mechanical properties than *T. tubmaniana*.

Natural durability and preservation

Resistance to fungi. Class 3 - moderately durable

Resistance to dry wood borers. Class S - susceptible (risk in all the wood)

Resistance to termites. Class S - susceptible

Treatability. Class 2 - moderately permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Requirement of a preservative treatment

Against dry wood borer. Requires appropriate 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. High risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes. Risks of discoloration during drying.

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	83	15.2
		50 - 40	53	80.0	14.1
		40 - 35	54	80.0	13.9
		35 - 30	55	75.0	12.5
		30 - 27	57	70.0	11.0
		27 - 24	58	61.0	9.4
		24 - 21	59	51.0	7.9
		21 - 18	60	47.0	7.3
		18 - 15	61	39.0	6.1
		15 - 12	62	35.0	5.6
		12 - 9	62	30.0	5.0
		9 - 6	62	26.0	4.4
Conditioning	8		55	(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. Risks of grain tearing in presence of interlocked grain; a reduced cutting angle is then recommended.

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

According to French standard NF B 52-001-1 (2018), strength class D40 can be provided by visual grading.

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
- Exterior joinery
- Exterior panelling
- Formwork
- Glued laminated
- Interior joinery
- Interior panelling
- Light carpentry
- Moulding
- Turned goods
- Veneer for back or face of plywood
- Veneer for interior of plywood
- Wood frame house

Main local names

Country	Local name
Cameroon	Ékop-ribi
Congo	Éko-andoung
Equatorial Guinea	Ekop
France (importated tropical timber)	Ékaba
Gabon	Éko-andoung

Germany (importated tropical timber)	Ekop
Liberia	Hoh
Liberia	Sikon
Netherlands (importated tropical timber)	Ekop
Spain (importated tropical timber)	Ekaban
United Kingdom (importated tropical timber)	Tetraberlinia