AZOBÉ

Lophira alata Banks (syn. Lophira procera)

Family: Ochnaceae · Continent: Africa



IDENTIFICATION

Family: Ochnaceae · Continent: Africa
Botanical names: Lophira alata Banks (syn. Lophira procera)
CITES (Washington Convention, 2016): no trade restriction

LOG DESCRIPTION

Diameter: 60 to 100 cm
Sapwood thickness: 2 to 4 cm
Buoyancy: does not float
Durability in forest: good

WOOD DESCRIPTION

Reference colour: dark red
Sapwood: clearly demarcated
Texture: coarse
Grain: interlocked
Interlocked grain: marked
Notes: dark red to purplish-brown wood. Transition zone between sapwood and heartwood. White deposits in the pores.



PHYSICAL & MECHANICAL PROPERTIES

Property	Mean value
Density (1)	**1.06**
Monnin hardness (1)	**10.7**
Volumetric shrinkage coefficient	**0.69% per %**
Total tangential shrinkage (T)	**10.3%**
Total radial shrinkage (R)	**7.3%**
T/R ratio	**1.4**
Fibre saturation point	**28%**
Thermal conductivity (λ)	**0.34 W/(m.K)**
Lower heating value	**19,590 kJ/kg**
Crushing strength (1)	**96 MPa**
Static bending strength (1)	**162 MPa**
Longitudinal modulus of elasticity (1)	**21,420 MPa**

(1) At 12% moisture content, with 1 MPa = 1 N/mm²

NATURAL DURABILITY AND TREATABILITY

Fungi resistance: class 2, durable · Dry wood borer resistance: class D, durable (sapwood distinct, risk limited to sapwood)
Termite resistance: class D, durable · Treatability: class 4, not permeable
Use class covered by natural durability: class 4, in contact with the ground or fresh water
Notes: species listed in NF EN 350. Transition wood has variable durability. Good resistance to marine borers in temperate waters, moderate in warm waters: use class 5 is covered only in temperate or cold marine environments.
Service life may vary with conditions of use (NF EN 335, May 2013).

PRESERVATIVE TREATMENT

Against dry wood borer attacks: this wood does not require preservative treatment.
Temporary humidification: no preservative treatment required.
Permanent humidification: no preservative treatment required.

DRYING

Drying rate: slow
Risk of distortion: high
Risk of case hardening: no known risk
Risk of checking: high
Risk of collapse: no known risk
Notes: a 3 to 4 month air-drying period (under cover) is recommended before kiln drying. Kiln drying is very difficult for thicknesses over 40 mm.
Suggested kiln schedule: no. 7

SAWING AND MACHINING

Blunting effect: fairly high
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: not recommended or of no interest
Slicing: not recommended or of no interest
Notes: quarter sawing is recommended (internal stresses). Some planing difficulties due to interlocked grain.

ASSEMBLING

Nailing and screwing: good holding, pre-drilling required.
Notes: very dense wood: gluing must follow good practice and the glue manufacturer's recommendations.

COMMERCIAL GRADING

Appearance grading of sawn timber according to SATA rules (1996).
General market: strips grades I, II, III, IV; short lengths grades I, II; short rafters grades I, II.
Special markets: strips and small boards grades I, II, III; rafters grades I, II, III.
Visual structural grading: strength class D70 according to European standard EN 1912 (2012) with the corresponding national standards; class D50 according to French standard NF B 52-001-1 (2011).

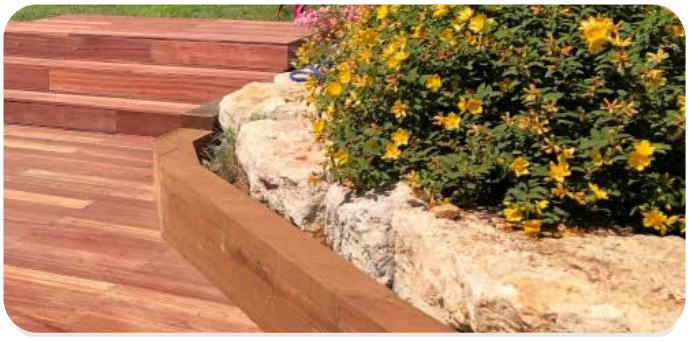
FIRE SAFETY

French conventional classification: thickness > 14 mm: M3 (moderately flammable); thickness < 14 mm: M4 (easily flammable).
Euroclass: D-s2, d0.
Default classification for solid timber meeting NF EN 14081-1 (April 2016): structural timber used for walls and ceilings, graded, with minimum mean density 0.35 and minimum thickness 22 mm.

MAIN END USES

- Heavy carpentry
- Interior stairs
- Vehicle or container flooring
- Structural framing
- Heavy-duty or industrial flooring
- Stakes
- Decking
- Bridges (ground/water contact)
- Bridges (not in contact)
- Posts
- Cooperage, vats
- Hydraulic works (fresh water)
- Hydraulic works (marine)
- Sleepers

Notes: in permanent humidity, transition wood must be removed. Resistant to one or more acids.



MAIN LOCAL NAMES

Country — Local name	Country — Local name
Germany — Bongossi, Bonkole	Ghana — Kaku
Benin — Éki	Equatorial Guinea — Akoga
Cameroon — Bongossi, Okoka	Nigeria — Eba, Ekki
Congo — Bonkolé	Central African Republic — Kofyo
Côte d'Ivoire — Azobé	United Kingdom — Ekki
Gabon — Akoga	Sierra Leone — Hendui

SNBG

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