AWOURA / BÉLI

Julbernardia pellegriniana Troupin

Family: Leguminosae (Caesalpiniaceae) · Continent: Africa



IDENTIFICATION

Family: Leguminosae (Caesalpiniaceae) · Continent: Africa
Botanical name: Julbernardia pellegriniana Troupin (syn. Paraberlinia bifoliolata)
CITES (Washington Convention, 2016): no trade restriction

LOG DESCRIPTION

Diameter: 80 to 100 cm
Sapwood thickness: 10 to 15 cm
Buoyancy: does not float
Durability in forest: moderate (treatment recommended)

WOOD DESCRIPTION

Reference colour: brown
Sapwood: clearly demarcated
Texture: medium
Grain: straight or interlocked
Interlocked grain: slight
Notes: strongly figured wood with alternating light and dark bands. Grain sometimes slanted.



PHYSICAL & MECHANICAL PROPERTIES

Property	Mean value
Density (1)	**0.77**
Monnin hardness (1)	**5.6**
Volumetric shrinkage coefficient	**0.60% per %**
Total tangential shrinkage (T)	**8.9%**
Total radial shrinkage (R)	**4.3%**
T/R ratio	**2.1**
Fibre saturation point	**27%**
Thermal conductivity (λ)	**0.25 W/(m.K)**
Lower heating value	**19,631 kJ/kg**
Crushing strength (1)	**68 MPa**
Static bending strength (1)	**128 MPa**
Longitudinal modulus of elasticity (1)	**17,840 MPa**

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

NATURAL DURABILITY AND TREATABILITY

Fungi resistance: class 3, moderately durable (species listed in standard NF EN 350)
Dry wood borer resistance: class D, durable (sapwood distinct, risk limited to sapwood)
Termite resistance: class M, moderately durable · Treatability: class 3, poorly permeable
Use class covered by natural durability: class 2, indoors or under cover (risk of humidification)

PRESERVATIVE TREATMENT

Against dry wood borer attacks: this wood does not require preservative treatment.
Temporary humidification: requires appropriate preservative treatment.
Permanent humidification: use of this wood is not recommended.

DRYING

Drying rate: normal to slow
Risk of distortion: low
Risk of case hardening: no known risk
Risk of checking: low
Risk of collapse: no known risk
Notes: risk of discolouration during drying.
Suggested kiln schedule: no. 6

ASSEMBLING

Nailing and screwing: good holding, pre-drilling required.

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, III.
Special markets: flooring strips and boards grades I, II, III; rafters grades I, II, III.
Visual structural grading: according to French standard NF B 52-001-1 (2011), strength class D40 can be assigned by visual grading.

SAWING AND MACHINING

Blunting effect: normal
Sawteeth recommended: ordinary or alloy steel
Cutting tools: ordinary
Peeling: not recommended or of no interest
Slicing: good
Notes: risk of distortion during machining, especially when planing.

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
- Cabinetwork (luxury furniture)
- Interior stairs
- Vehicle or container flooring
- Panelling
- Interior joinery
- Furniture and components
- Framing
- Flooring
- Sliced veneer



MAIN LOCAL NAMES

Country — Local name	Country — Local name
Germany — Zebrali	France — Zébrali
Cameroon — Ékop-béli	Gabon — Awoura, Béli

SNBG

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