# African walnut

Half-quarter sawn

Flat sawn

Family. Meliaceae

Botanical Name(s).

*Lovoa swynnertonii*
*Lovoa trichilioides*
*Lovoa klaineana (synonymous)*

Continent. Africa

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

## Description of logs

Diameter. From 60 to 120 cm

Thickness of sapwood. From 3 to 7 cm

Floats. Yes

Log durability. Moderate (treatment recommended)

## Description of wood

Colour reference. Brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Interlocked

Interlocked grain. Slight

Notes. Ring shakes and brittleheart possible in some logs. Wood yellow brown or grey brown, with black streaks or veins taking a golden glint. Black deposits in the pores.

## 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] | 0.53 |
| Monnin hardness[1] | 2.3 |
| Coefficient of volumetric shrinkage | 0.43 % per % |
| Total tangential shrinkage (St) | 5.8 % |
| Total radial shrinkage (Sr) | 3.7 % |
| Ratio St/Sr | 1.6 |
| Fibre saturation point | 27 % |
| Thermal conductivity (λ) | 0.18 W/(m.K) |
| Lower heating value | 19,600 kJ/kg |
| Crushing strength[1] | 47 MPa |
| Static bending strength[1] | 72 MPa |
| Modulus of elasticity[1] | 10,460 MPa |

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



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## Natural durability and preservation

Resistance to fungi. Class 3 to 4 - moderately to poorly durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 3-4 - poorly or not permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Notes. This species is listed in the European standard NF EN 350 (2016).

## 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. Rapid to normal

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes. Existing shakes tend to slightly extend.

Suggested drying program.

| Phases | Duration (H) | MC (%) probes | T (°C) | Rh (%) | UGL (%) |
|---|---|---|---|---|---|
| **Prewarm 1** | | > 50 | 50 | 86 | 16.5 |
| **Prewarm 2** | 3 | > 50 | 52 | 85 | 16.0 |
| **Drying** | | > 50 | 55 | 82 | 14.7 |
| | | 50 - 40 | 55 | 80.0 | 13.8 |
| | | 40 - 35 | 55 | 75.0 | 12.6 |
| | | 35 - 30 | 56 | 73.0 | 12.0 |
| | | 30 - 27 | 58 | 67.0 | 10.5 |
| | | 27 - 24 | 60 | 58.0 | 8.9 |
| | | 24 - 21 | 62 | 50.0 | 7.5 |
| | | 21 - 18 | 64 | 45.0 | 6.8 |
| | | 18 - 15 | 65 | 37.0 | 5.7 |
| | | 15 - 12 | 65 | 34.0 | 5.3 |
| | | 12 - 9 | 65 | 28.0 | 4.5 |
| | | 9 - 6 | 65 | 24.0 | 4.0 |
| **Conditioning** | 6 | | 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



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Sawteeth recommended. Ordinary or alloy steel

Cutting tools. Ordinary

Peeling. Good

Slicing. Good

Notes. Difficulties due to interlocked grain in planing (tearing). Keep sharp tools. Ribbon like aspect on quartersawn. Sawdust may be irritant.

## Assembling

Nailing and screwing. Good

## 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
- Interior joinery
- Interior panelling
- Light carpentry
- Seats
- Sliced veneer
- Turned goods
- Veneer for back or face of plywood

Notes. Should not be confused with WALNUT (Juglans spp.), only colours are similar.

## Main local names

| Country | Local name |
|---|---|
| Cameroon | Bibolo |
| Central African Republic | Boyo kondi |
| Congo | Bosso |
| Côte d'Ivoire | Dibétou |
| Democratic Republic of the Congo | Bombulu |
| Democratic Republic of the Congo | Lifaki muindu |
| Equatorial Guinea | M'bero |



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| | |
|---|---|
| Equatorial Guinea | N'vero |
| France (importated tropical timber) | Dibétou |
| France (importated tropical timber) | Noyer d'afrique |
| France (importated tropical timber) | Noyer du gabon |
| Gabon | Éyan |
| Ghana | African walnut |
| Ghana | Dubini-biri |
| Ghana | Mpengwa |
| Nigeria | Anamenila |
| Nigeria | Apopo |
| Nigeria | Sida |
| Sierra Leone | Wnaimei |
| United Kingdom (importated tropical timber) | African walnut |
| United Kingdom (importated tropical timber) | Tigerwood |
| United States of America (importated tropical timber) | Congowood |
| United States of America (importated tropical timber) | Tigerwood |



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