# African canarium

Quarter sawn

Flat sawn

Family. Burseraceae

Botanical Name(s).

*Canarium schweinfurthii*

Continent. Africa

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

## Description of logs

Diameter. From 80 to 120 cm

Thickness of sapwood. From 5 to 10 cm

Floats. Yes

Log durability. Low (treatment necessary)

## Description of wood

Colour reference. Pinkish brown

Sapwood. Not demarcated

Texture. Coarse

Grain. Interlocked

Interlocked grain. Marked

Notes. Light brown slightly pinkish. 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] | 0.49 |
| Monnin hardness[1] | 1.3 |
| Coefficient of volumetric shrinkage | 0.42 % per % |
| Total tangential shrinkage (St) | 9.9 % |
| Total radial shrinkage (Sr) | 5.9 % |
| Ratio St/Sr | 1.7 |
| Fibre saturation point | 40 % |
| Thermal conductivity (λ) | 0.17 W/(m.K) |
| Lower heating value | |
| Crushing strength[1] | 36 MPa |
| Static bending strength[1] | 59 MPa |
| Modulus of elasticity[1] | 10,490 MPa |

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

## Natural durability and preservation

Resistance to fungi. Class 5 - not durable



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

Resistance to termites. Class S - susceptible

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 1 - inside (no dampness)

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

## Requirement of a preservative treatment

Against dry wood borer. Requires appropriate preservative treatment

In case of temporary humidification. Use not recommended

In case of permanent humidification. Use not recommended

## Drying

Drying rate. Slow

Risk of distorsion. High risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. Yes

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. Fairly high

Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Good



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Slicing. Good

## 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

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

- Blockboard
- Boxes and crates
- Current furniture or furniture components
- Formwork
- Interior joinery
- Interior panelling
- Sliced veneer
- Veneer for back or face of plywood
- Veneer for interior of plywood

Notes. Can be used as substitute for OKOUME (Aucoumea klaineana) for plywood.

## Main local names

| Country | Local name |
|---|---|
| Angola | M'bili |
| Cameroon | Abel |
| Central African Republic | Gbéri |
| Congo | M'bili |
| Côte d'Ivoire | Aiélé |
| Democratic Republic of the Congo | Bidikala |
| Democratic Republic of the Congo | M'bidikala |
| Equatorial Guinea | Abe |
| Gabon | Abeul |
| Gabon | Ovili |
| Ghana | Bediwunua |
| Ghana | Eyere |
| Nigeria | Elemi |



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| | |
|---|---|
| Sierra Leone | Billi |
| Uganda | Mwafu |
| United Kingdom (importated tropical timber) | Canarium |



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