

Andoung

Family. Leguminosae (Caesalpiniaceae)

Botanical Name(s).

Aphanocalyx hedinii

Monopetalanthus hedinii (synonymous)

Aphanocalyx heitzii

Monopetalanthus heitzii (synonymous)

Bikinia coriacea

Monopetalanthus coriacea (synonymous)

Bikinia durandii

Monopetalanthus durandii (synonymous)

Bikinia pellegrini

Monopetalanthus pellegrini (synonymous)

Bikinia p.p.

Monopetalanthus p.p. (synonymous)

Continent. Africa

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

Notes. Frequently confused with EKABA (*Tetraberlinia* spp.).

Description of logs

Diameter. From 80 to 100 cm

Thickness of sapwood. From 5 to 15 cm

Floats. Yes

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Pinkish brown

Sapwood. Not clearly demarcated

Texture. Medium

Grain. Interlocked

Interlocked grain. Marked

Notes. Pink brown to red brown. Possible 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 | 0.59 |
| Monnin hardness ¹ | 3.0 |
| Coefficient of volumetric shrinkage | 0.46 % per % |
| Total tangential shrinkage (St) | 7.4 % |
| Total radial shrinkage (Sr) | 4.0 % |
| Ratio St/Sr | 1.9 |
| Fibre saturation point | 28 % |



Quarter sawn



Flat sawn

| | |
|--------------------------------------|--------------|
| Thermal conductivity (λ) | 0.20 W/(m.K) |
| Lower heating value | 18,740 kJ/kg |
| Crushing strength ¹ | 48 MPa |
| Static bending strength ¹ | 90 MPa |
| Modulus of elasticity ¹ | 14,010 MPa |

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

Natural durability and preservation

Resistance to fungi. Class 5 - not 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 1 - inside (no dampness)

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. Slight risk

Risk of collapse. No known specific risk

Notes. Must be dried with care to avoid the risks of distortion in case of highly interlocked grain.

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

Sawteeth recommended. Ordinary or alloy steel

Cutting tools. Ordinary

Peeling. Good

Slicing. Good

Notes. Some difficulties in presence of highly interlocked grain. Tendency to woolliness.

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

According to French standard NF B 52-001-1 (2018), strength class D30 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

- Boxes and crates
- Current furniture or furniture components
- Exterior joinery
- Flooring
- Formwork
- Indoor staircases
- Interior joinery
- Interior panelling
- Light carpentry
- Sliced veneer
- Veneer for back or face of plywood
- Veneer for interior of plywood



Bed frames – Gabon Wood Industries, Nkok (Gabon).

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Main local names

| Country | Local name |
|-------------------------------------|------------|
| Cameroon | Ékop-mayo |
| Cameroon | Zoélé |
| Equatorial Guinea | Andjung |
| Equatorial Guinea | Ekop |
| France (importated tropical timber) | N'douma |
| Gabon | Andoung |
| Gabon | N'douma |