

Gedu nohor

Family. Meliaceae

Botanical Name(s).

Entandrophragma angolense

Entandrophragma congoense

Entandrophragma excelsum

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 6 to 10 cm

Floats. Yes

Log durability. Moderate (treatment recommended)

Description of wood

Colour reference. Red brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Interlocked

Interlocked grain. Marked

Notes. Wood red to dark brown, with golden shades.

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 | 0.55 |
| Monnin hardness ¹ | 2.2 |
| Coefficient of volumetric shrinkage | 0.41 % per % |
| Total tangential shrinkage (St) | 8.0 % |
| Total radial shrinkage (Sr) | 4.6 % |
| Ratio St/Sr | 1.7 |
| Fibre saturation point | 32 % |
| Thermal conductivity (λ) | 0.19 W/(m.K) |
| Lower heating value | 18,650 kJ/kg |
| Crushing strength ¹ | 47 MPa |
| Static bending strength ¹ | 80 MPa |
| Modulus of elasticity ¹ | 10,980 MPa |

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

Natural durability and preservation



Quarter sawn



Flat sawn

Resistance to fungi. Class 3 - moderately durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 4 - 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. Normal

Risk of distorsion. High risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes. Drying requires care in presence of highly interlocked grain in order to avoid distortions.

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. In planing, if the grain is highly interlocked, a 15° cutting angle is necessary to avoid tearing. Tends to burn in mortising.

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 D18 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

- Cabinetwork (high class furniture)
- Current furniture or furniture components
- Exterior joinery
- Exterior panelling
- Flooring
- Indoor staircases
- Interior joinery
- Interior panelling
- Light carpentry
- Ship building (planking and deck)
- Sliced veneer
- Veneer for back or face of plywood



Office wardrobe, CIRAD, Montpellier (France).

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Main local names

| Country | Local name |
|---|----------------|
| Angola | Acuminata |
| Angola | Livuite |
| Cameroon | Abéba |
| Central African Republic | Kanga |
| Congo | Kilula |
| Côte d'Ivoire | Tiama |
| Democratic Republic of the Congo | Lifaki |
| Democratic Republic of the Congo | Vovo |
| Equatorial Guinea | Dongomanguila |
| Gabon | Abeubègne |
| Germany (importated tropical timber) | Acuminata |
| Germany (importated tropical timber) | Tiama mahogani |
| Ghana | Edinam |
| Nigeria | Gedu nohor |
| Uganda | Mukusu |
| United Kingdom (importated tropical timber) | Gedu nohor |