

## Ossimiale

Family. Fabaceae-Mimosoideae

Botanical Name(s).

*Newtonia leucocarpa*

*Piptadenia leucocarpa* (synonymous)

Continent. Africa

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

### Description of logs

Diameter. From 60 to 80 cm

Thickness of sapwood. From 5 to 10 cm

Floats. Yes

Log durability. Low (treatment necessary)

### Description of wood

Colour reference. Red brown

Sapwood. Not clearly demarcated

Texture. Coarse

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Sapwood yellowish to light brown. Heartwood silvery pink to reddish brown, often with wide darker veins.

### 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 <sup>1</sup>        | 0.71          |
| Monnin hardness <sup>1</sup>         | 4.3           |
| Coefficient of volumetric shrinkage  | 0.37 % per %  |
| Total tangential shrinkage (St)      | 7.2 %         |
| Total radial shrinkage (Sr)          | 3.9 %         |
| Ratio St/Sr                          | 1.8           |
| Fibre saturation point               | 36 %          |
| Thermal conductivity (λ)             | 0.24 W/(m.K)  |
| Lower heating value                  | 19,830 kJ/kg  |
| Crushing strength <sup>1</sup>       | 63 MPa        |
| Static bending strength <sup>1</sup> | 111 MPa       |
| Modulus of elasticity <sup>1</sup>   | 14,740 MPa    |

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

### Natural durability and preservation



Quarter sawn



Flat sawn

Resistance to fungi. Class 4 - poorly durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 3 - poorly permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

### 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. Normal

Risk of distorsion. No risk or very slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes.

Suggested drying program.

| Phases              | Duration (H) | MC (%) probes | T (°C) | Rh (%) | UGL (%) |
|---------------------|--------------|---------------|--------|--------|---------|
| <b>Prewarm 1</b>    |              | > 50          | 50     | 87     | 17.0    |
| <b>Prewarm 2</b>    | 4            | > 50          | 50     | 86     | 16.5    |
| <b>Drying</b>       |              | > 50          | 53     | 85     | 15.7    |
|                     |              | 50 - 40       | 53     | 82.0   | 14.6    |
|                     |              | 40 - 35       | 54     | 78.0   | 13.4    |
|                     |              | 35 - 30       | 55     | 77.0   | 12.9    |
|                     |              | 30 - 27       | 57     | 73.0   | 11.9    |
|                     |              | 27 - 24       | 58     | 68.0   | 10.7    |
|                     |              | 24 - 21       | 60     | 61.0   | 9.3     |
|                     |              | 21 - 18       | 62     | 52.0   | 7.9     |
|                     |              | 18 - 15       | 64     | 43.0   | 6.6     |
|                     |              | 15 - 12       | 65     | 39.0   | 6.0     |
|                     |              | 12 - 9        | 65     | 31.0   | 5.0     |
|                     |              | 9 - 6         | 65     | 28.0   | 4.5     |
| <b>Conditioning</b> | 8            |               | 58     | (3)    | (2)     |
| <b>Cooling</b>      | (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. Not recommended or without interest

Notes. Very fine surface after sanding.

## Assembling

Nailing and screwing. Good but pre-boring necessary

## 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
- Cooperage
- Current furniture or furniture components
- Flooring
- Formwork
- Indoor staircases
- Interior joinery
- Light carpentry
- Open boats
- Pulp
- Sculpture
- Tool handles (resilient woods)
- Turned goods
- Vehicle or container flooring
- Veneer for back or face of plywood
- Veneer for interior of plywood
- Wood frame house

Notes. Close to Ozigo but low silica content.

## Main local names

| Country           | Local name |
|-------------------|------------|
| Cameroon          | Nom atui   |
| Equatorial Guinea | Atui       |
| Equatorial Guinea | Eseng      |
| Gabon             | Ossimiale  |