**Family:** HUMIRIACEAE (angiosperm)  
**Scientific name(s):** Sacoglottis gabonensis  
**Commercial restriction:** no commercial restriction

### WOOD DESCRIPTION

- **Color:** red brown  
- **Sapwood:** not clearly demarcated  
- **Texture:** fine  
- **Grain:** straight or interlocked  
- **Interlocked grain:** marked  
- **Note:** Trunk often sinuous. Wood purplish red to dark brown.

### LOG DESCRIPTION

- **Diameter:** from 60 to 100 cm  
- **Thickness of sapwood:**  
- **Floats:** no  
- **Log durability:** good

### PHYSICAL PROPERTIES

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

| Property                              | Mean  | Std dev. | | Property                               | Mean  | Std dev. |
|----------------------------------------|-------|----------| |----------------------------------------|-------|----------|
| Specific gravity *:*                   | 0.89  | 0.02     | | Crushing strength *:*                  | 84 MPa| 18 MPa   |
| Monnin hardness *:*                    | 8.1   | 0.7      | | Static bending strength *:*            | 138 MPa| 29 MPa   |
| Coeff. of volumetric shrinkage:        | 0.47% | 0.12%    | | Modulus of elasticity *:*              | 21770 MPa|        |
| Total tangential shrinkage (TS):       | 9.1%  |          | | (*: at 12% moisture content, with 1 MPa = 1 N/mm²) |        |          |
| Total radial shrinkage (RS):           | 5.5%  |          | | Stability:                             | moderately stable |        |
| TS/RS ratio                            | 1.7   |          | | Musical quality factor:                | 118.3 %| measured at 2747 Hz |
| Fiber saturation point:                | 31%   |          | |                                        |        |          |

### MECHANICAL AND ACOUSTIC PROPERTIES

- **Stability:** moderately stable
- **Musical quality factor:** 118.3 measured at 2747 Hz

### NATURAL DURABILITY AND TREATABILITY

Fungi and termite resistance refers to end-uses under temperate climate. Except for special comments on sapwood, natural durability is based on mature heartwood. Sapwood must always be considered as non-durable against wood degrading agents.  

E.N. = Euro Norm

- **Funghi (according to E.N. standards):** class 1 - very durable  
- **Dry wood borers:** heartwood durable but sapwood not clearly demarcated  
- **Termites (according to E.N. standards):** class D - durable  
- **Treatability (according to E.N. standards):** class 4 - not permeable  
- **Use class ensured by natural durability:** class 4 - in ground or fresh water contact  
- **Species covering the use class 5:** No

Note: The possible presence of few demarcated sapwood in sawnwoods may have an influence on the expected durability. According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

### REQUIREMENT OF A PRESERVATIVE TREATMENT

- Against dry wood borer attacks: requires appropriate preservative treatment  
- In case of risk of temporary humidification: does not require any preservative treatment  
- In case of risk of permanent humidification: does not require any preservative treatment
DRYING

Drying rate: slow
Risk of distortion: high risk
Risk of casehardening: no
Risk of checking: high risk
Risk of collapse: no

Possible drying schedule: 1

<table>
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<th>M.C. (%)</th>
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<th>Air humidity (%)</th>
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This schedule is given for information only and is applicable to thickness lower or equal to 38 mm. It must be used in compliance with the code of practice. For thickness from 38 to 75 mm, the air relative humidity should be increased by 5 % at each step. For thickness over 75 mm, a 10 % increase should be considered.

SAWING AND MACHINING

Blunting effect: high
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: not recommended or without interest
Slicing: not recommended or without interest

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: correct (for interior only)
Note: Tricky gluing due to the high specific gravity.

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to SATA grading rules (1996)
For the "General Purpose Market":
Possible grading for square edged timbers: choix I, choix II, choix III, choix IV
Possible grading for short length lumbers: choix I, choix II
Possible grading for short length rafters: choix I, choix II, choix III
For the "Special Market":
Possible grading for strips and small boards (ou battens): choix I, choix II, choix III
Possible grading for rafters: choix I, choix II, choix III

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)
Thickness < 14 mm : M.4 (easily inflammable)

Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

END-USES

Hydraulic works (fresh water) Sleepers
Industrial or heavy flooring Bridges (parts in contact with water or ground)
Bridges (parts not in contact with water or ground) Wood frame house
Heavy carpentry Vehicle or container flooring
Flooring Poles

Note: Very difficult finishing due to interlocked grain.
### MAIN LOCAL NAMES

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<th>Local name</th>
<th>Country</th>
<th>Local name</th>
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### Physical Properties

#### Specific Gravity
- 0.2: Very light
- 0.3: Light
- 0.4: Medium
- 0.5: Heavy
- 0.6: Very heavy

#### Mohr's Hardness
- 1: Very soft
- 2: Soft
- 3: Medium
- 4: Hard
- 5: Very hard

#### Coefficient of Volumetric Shrinkage (%)
- 0.3: Low
- 0.4: Medium
- 0.5: High

#### Total Tangential Shrinkage (%)
- 4: Low
- 5: Medium
- 6: High

#### Total Radial Shrinkage (%)
- 2: Low
- 3: Medium
- 4: High

#### Crushing Strength (MPa)
- 10: Low
- 20: Medium
- 30: High

#### Static Bending Strength (MPa)
- 25: Low
- 50: Medium
- 100: High

#### Modulus of Elasticity (% 1000 MPa)
- 6: Low
- 8: Medium
- 10: High

### Resistance Properties

#### Resistance to Fungi
- Not durable
- Poorly durable
- Moderately durable
- Durable
- Very durable

#### Resistance to Dry Wood Insects Borers
- Susceptible
- Durable

#### Resistance to Termites
- Susceptible
- Moderately durable
- Durable

#### Treatability
- Not permeable
- Poorly permeable
- Moderately permeable
- Easily permeable

#### Stability
- Poorly stable
- Moderately stable
- Stable

#### Fibers Saturation Point
- 15%
- 25%
- Medium
- 35%
- High
- 45%