Family: RUTACEAE (angiosperm)
Scientific name(s): Balfourodendron riedelianum
Commercial restriction: no commercial restriction

WOOD DESCRIPTION
- Color: creamy white
- Sapwood: not demarcated
- Texture: fine
- Grain: straight or interlocked
- Interlocked grain: slight

LOG DESCRIPTION
- Diameter: from 60 to 80 cm
- Thickness of sapwood:
- Floats: no
- Log durability: moderate (treatment recommended)

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Mean</th>
<th>Std dev.</th>
<th>Mean</th>
<th>Std dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity *:</td>
<td>0.82</td>
<td>0.05</td>
<td>Crushing strength *:</td>
<td>67 MPa</td>
</tr>
<tr>
<td>Monnin hardness *:</td>
<td>7.3</td>
<td>1.0</td>
<td>Static bending strength *:</td>
<td>131 MPa</td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage:</td>
<td>0.58 %</td>
<td>0.01 %</td>
<td>Modulus of elasticity *:</td>
<td>15850 MPa</td>
</tr>
<tr>
<td>Total tangential shrinkage (TS):</td>
<td>8.6 %</td>
<td>0.7 %</td>
<td>(*: at 12% moisture content, with 1 MPa = 1 N/mm²)</td>
<td></td>
</tr>
<tr>
<td>Total radial shrinkage (RS):</td>
<td>4.9 %</td>
<td>0.5 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS/RS ratio:</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point:</td>
<td>24 %</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stability: poorly stable

MECHANICAL AND ACOUSTIC PROPERTIES

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 3 - moderately durable
  - Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)
  - Termites (according to E.N. standards): class 5 - susceptible
  - Treatedability (according to E.N. standards): class 1 - easily permeable
  - Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)
  - Species covering the use class 5: No

REQUIREMENT OF A PRESERVATIVE TREATMENT

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

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

Note: Kiln drying must be done slowly in order to reduce the risk of extensive end checking.

SAWING AND MACHINING

- Blunting effect: normal
- Sawteeth recommended: ordinary or alloy steel
- Cutting tools: ordinary
  - Peeling: not recommended or without interest
  - Slicing: good

ASSEMBLING

- Nailing / screwing: good but pre-boring necessary
- Gluing: correct

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to NHLA grading rules (January 2007)
Possible grading: FAS, Select, Common 1, Common 2, Common 3

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

- Sliced veneer
- Interior joinery
- Flooring
- Current furniture or furniture components
- Sculpture
- Turned goods
- Moulding

Note: Substitute for European BOXWOOD (Buxus sempervirens).
## MAIN LOCAL NAMES

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>Country</th>
<th>Local name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>GUATAMBÚ</td>
<td>Brazil (South)</td>
<td>GUATAMBÚ</td>
</tr>
<tr>
<td>Brazil (South)</td>
<td>PAU MARFIM</td>
<td>Paraguay</td>
<td>GUATAMBÚ BLANCO</td>
</tr>
</tbody>
</table>
### Specific gravity

- **Very light**
- **Light**
- **Medium**
- **Heavy**
- **Very heavy**

### Mornin hardness

- **Very soft**
- **Soft**
- **Medium**
- **Hard**
- **Very hard**

### Coefficient of volumetric shrinkage (%)

- **Low**
- **Medium**
- **High**

### Total tangential shrinkage (%)

- **Low**
- **Medium**
- **High**

### Total radial shrinkage (%)

- **Low**
- **Medium**
- **High**

### Crushing strength (MPa)

- **Low**
- **Medium**
- **High**

### Static bending strength (MPa)

- **Low**
- **Medium**
- **High**

### Modulus of elasticity (<1000 MPa)

- **Low**
- **Medium**
- **High**

### 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% Low
- 25% Medium
- 35% High
- 45%