**FABACEAE-CAESALPINIOIDEAE (angiosperm)**

**Family:** Fabaceae-Caesalpinioideae

**Scientific name(s):**
- Bobgunnia fistuloides
- Swartzia fistuloides (synonymous)

**Commercial restriction:** no commercial restriction

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### WOOD DESCRIPTION

<table>
<thead>
<tr>
<th>Color:</th>
<th>light red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sapwood:</td>
<td>clearly demarcated</td>
</tr>
<tr>
<td>Texture:</td>
<td>fine</td>
</tr>
<tr>
<td>Grain:</td>
<td>interlocked</td>
</tr>
<tr>
<td>Interlocked grain:</td>
<td>slight</td>
</tr>
</tbody>
</table>

**Note:** Wood pinkish white to light red, with red brown veins.

### LOG DESCRIPTION

- **Diameter:** from 50 to 80 cm
- **Thickness of sapwood:** from 1 to 2 cm
- **Floats:** no

**Log durability:** good

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### PHYSICAL PROPERTIES

**Mechanical and Acoustic 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>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity *:</td>
<td>1.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Monnin hardness *:</td>
<td>9.1</td>
<td></td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage:</td>
<td>0.66 %</td>
<td>0.05 %</td>
</tr>
<tr>
<td>Total tangential shrinkage (TS):</td>
<td>6.2 %</td>
<td></td>
</tr>
<tr>
<td>Total radial shrinkage (RS):</td>
<td>4.2 %</td>
<td></td>
</tr>
<tr>
<td>TS/RS ratio:</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point:</td>
<td>19 %</td>
<td></td>
</tr>
</tbody>
</table>

**Crushing strength *:** 90 MPa

**Static bending strength *:** 149 MPa

**Modulus of elasticity *:** 21290 MPa

**Musical quality factor:** 160.8 measured at 2351 Hz

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### 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**

- **Fungi (according to E.N. standards):** class 1 - very durable
- **Dry wood borers:** durable - sapwood demarcated (risk limited to sapwood)
- **Termites (according to E.N. standards):** class D - durable
- **Treatability (according to E.N. standards):** class 3 - poorly permeable
- **Use class ensured by natural durability:** class 4 - in ground or fresh water contact

**Species covering the use class 5:** No

**Note:** According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

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### REQUIREMENT OF A PRESERVATIVE TREATMENT

- **Against dry wood borer attacks:** does not require any 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: slight risk  
Risk of casehardening: no  
Risk of checking: high risk  
Risk of collapse: no  

Note: Some risks of end checking and extension of existing cracks.

Possible drying schedule: 4

<table>
<thead>
<tr>
<th>M.C. (%)</th>
<th>Temperature (°C)</th>
<th>Air humidity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dry-bulb</td>
<td>wet-bulb</td>
</tr>
<tr>
<td>Green</td>
<td>42</td>
<td>39</td>
</tr>
<tr>
<td>50</td>
<td>48</td>
<td>43</td>
</tr>
<tr>
<td>40</td>
<td>48</td>
<td>43</td>
</tr>
<tr>
<td>30</td>
<td>48</td>
<td>43</td>
</tr>
<tr>
<td>15</td>
<td>54</td>
<td>46</td>
</tr>
</tbody>
</table>

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: normal  
Sawteeth recommended: ordinary or alloy steel  
Cutting tools: ordinary  
Peeling: not recommended or without interest  
Slicing: nod  

Note: Requires power. Sawblades can vibrate and overheat. Tendency to burn the wood in boring. Sometimes slight wooliness. Sawdust sometimes irritant.

**Assembling**

Nailing / screwing: good but pre-boring necessary  
Gluing: correct (for interior only)  

Note: Gluing must be done carefully (very dense wood).

**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**

- Sliced veneer  
- Sculpture  
- Turned goods  
- Cooperage  

- Cabinetwork (high class furniture)  
- Percussion instruments  
- Tool handles (resilient woods)  
- Resistant to one or several acids
<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>Country</th>
<th>Local name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroon</td>
<td>NOM NSAS</td>
<td>Congo</td>
<td>KISASAMBA</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>BOTO</td>
<td>Gabon</td>
<td>OKEN</td>
</tr>
<tr>
<td>Mozambique</td>
<td>PAU FERRO</td>
<td>Nigeria</td>
<td>UDOGHOGHO</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>N’ GUESSA</td>
<td>Democratic Republic of the Congo</td>
<td>NSAKALA</td>
</tr>
</tbody>
</table>