**WOOD DESCRIPTION**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>purple</td>
</tr>
<tr>
<td>Sapwood</td>
<td>clearly demarcated</td>
</tr>
<tr>
<td>Texture</td>
<td>medium</td>
</tr>
<tr>
<td>Grain</td>
<td>straight</td>
</tr>
<tr>
<td>Interlocked grain</td>
<td>absent</td>
</tr>
</tbody>
</table>

Note: Purple wood turns to dark brown with light. Possible presence of internal stresses.

**LOG DESCRIPTION**

Diameter: from 50 to 90 cm  
Thickness of sapwood: from 5 to 10 cm  
Floats: no  
Log durability: moderate (treatment recommended)

**PHYSICAL PROPERTIES**

<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>0,87</td>
<td>0,08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monnin hardness *</td>
<td>7,6</td>
<td>1,4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage</td>
<td>0,58%</td>
<td>0,07%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total tangential shrinkage (TS)</td>
<td>6,7%</td>
<td>0,9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total radial shrinkage (RS)</td>
<td>4,4%</td>
<td>0,8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS/RS ratio</td>
<td>1,5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point</td>
<td>23%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stability: moderately stable

**MECHANICAL AND ACOUSTIC PROPERTIES**

<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>Crushing strength *</td>
<td>80 MPa</td>
<td>9 MPa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static bending strength *</td>
<td>141 MPa</td>
<td>19 MPa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modulus of elasticity *</td>
<td>21250 MPa</td>
<td>2220 MPa</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

Musical quality factor: 168,4 measured at 2890 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

- Fungi (according to E.N. standards): class 2-3 - durable to moderately 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 4 - not permeable
- Use class ensured by natural durability: class 3 - not in ground contact, outside
- Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.

- Resistance to decay: moderate to good.
- 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: does not require any preservative treatment
- In case of risk of permanent humidification: use not recommended
DRYING

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

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: fairly high
Sawteeth recommended: stellite-tipped tungsten carbide
Cutting tools: tungsten carbide
Peeling: not recommended or without interest
Slicing: good
Note: Requires power.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: correct
Note: Tends to split when nailing.

COMMERCIAL GRADING

Appearance grading for sawn timbers:
According to NHLA grading rules (January 2007)
Possible grading: FAS, Select, Common 1, Common 2, Common 4
In French Guiana, the local name of this species is "AMARANTE". Grading is done according to local rules "Bois guyanais classés".
Possible grading: Choix 1, choix 2, choix 3, choix 4

FIRE SAFETY

Conventional French grading:
Thickness > 14 mm: M.3 (moderately inflammable)
Thickness < 14 mm: M.4 (easily inflammable)
Euroclasses grading: C s2 d0
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.
Given according to procedures given by European standard NF EN 13501-1 (September 2007). European grading report done by CSTB whith the following number : RA05-0238A.

END-USES

Cabinetwork (high class furniture)
Sliced veneer
Sculpture
Ship building (ribs)
Exterior joinery
Stairs (inside)
Glued laminated
Interior joinery
Musical instruments
Tool handles (resilient woods)

Current furniture or furniture components
Interior panelling
Flooring
Ship building (planking and deck)
Exterior panelling
Heavy carpentry
Vehicle or container flooring
Turned goods
Wood-ware

Note: In the USA, AMARANTE is used to make high class coffins.
### 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>Brazil (Amazon)</td>
<td>GUARABU</td>
<td>Brazil (Amazon)</td>
<td>IPE ROXO</td>
</tr>
<tr>
<td>Brazil (Amazon)</td>
<td>PAU ROXO</td>
<td>Brazil (Amazon)</td>
<td>ROXINHO</td>
</tr>
<tr>
<td>Colombia</td>
<td>TANANEO</td>
<td>Guyana</td>
<td>KOROBORELLI</td>
</tr>
<tr>
<td>Guyana</td>
<td>PURPLEHEART</td>
<td>French Guiana</td>
<td>AMARANTE</td>
</tr>
<tr>
<td>French Guiana</td>
<td>BOIS VIOLET</td>
<td>Panama</td>
<td>NAZANERO</td>
</tr>
<tr>
<td>Suriname</td>
<td>PURPERHART</td>
<td>Venezuela</td>
<td>MORADO</td>
</tr>
<tr>
<td>Venezuela</td>
<td>ZAPATERO</td>
<td>Germany</td>
<td>VIOLETTHOLZ</td>
</tr>
<tr>
<td>United States of America</td>
<td>AMARANTH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Specific Gravity

- **Very light**: 0.2
- **Light**: 0.3 to 0.4
- **Medium**: 0.5 to 0.6
- **Heavy**: 0.7 to 0.8
- **Very heavy**: 0.9 to 1.2

### Monnin Hardness

- **Very soft**: 1
- **Soft**: 2 to 3
- **Medium**: 4 to 5
- **Hard**: 6 to 10
- **Very hard**: 12 to 20

### Coefficient of Volumetric Shrinkage (%)

- **Low**: 0.3 to 0.4
- **Medium**: 0.5 to 0.6
- **High**: 0.7 to 0.8

### Total Tangential Shrinkage (%)

- **Low**: 4 to 5
- **Medium**: 6 to 8
- **High**: 9 to 12

### Total Radial Shrinkage (%)

- **Low**: 2 to 3
- **Medium**: 4 to 6
- **High**: 7 to 9

### Crushing Strength (MPa)

- **Low**: 0 to 20
- **Medium**: 20 to 50
- **High**: 50 to 80

### Static Bending Strength (MPa)

- **Low**: 25 to 50
- **Medium**: 50 to 75
- **High**: 75 to 100

### Modulus of Elasticity (<1000 MPa)

- **Low**: 6 to 8
- **Medium**: 10 to 14
- **High**: 16 to 20

### Resistance to Fungi

- **Not durable**
- **Poorly durable**
- **Moderately durable**
- **Durable**
- **Very durable**

### Resistance to Dry Wood Insects Bokers

- **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 %**