Family: BURSERACEAE (angiosperm)
Scientific name(s): Dacryodes normandii
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light brown
Sapwood: not clearly demarcated
Texture: medium
Grain: straight or interlocked
Interlocked grain: slight
Note: Grain sometimes wavy.

LOG DESCRIPTION

Diameter: from 60 to 80 cm
Thickness of sapwood: from 2 to 4 cm
Floats: yes
Log durability: no information available

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>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity *:</td>
<td>0,59</td>
<td>0,03</td>
</tr>
<tr>
<td>Monnin hardness *:</td>
<td>2,9</td>
<td>0,4</td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage</td>
<td>0,51%</td>
<td>0,06%</td>
</tr>
<tr>
<td>Total tangential shrinkage (TS):</td>
<td>7,7%</td>
<td>0,9%</td>
</tr>
<tr>
<td>Total radial shrinkage (RS):</td>
<td>4,6%</td>
<td>0,6%</td>
</tr>
<tr>
<td>TS/RS ratio:</td>
<td>1,7</td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point:</td>
<td>28%</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>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing strength *:</td>
<td>48 MPa</td>
<td>6 MPa</td>
</tr>
<tr>
<td>Static bending strength *:</td>
<td>87 MPa</td>
<td>9 MPa</td>
</tr>
<tr>
<td>Modulus of elasticity *:</td>
<td>15040 MPa</td>
<td>2728 MPa</td>
</tr>
</tbody>
</table>

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

Musical quality factor: 101,3 measured at 2740 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 3 - moderately durable
  - Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)
- **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 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: normal to slow
Risk of distortion: slight risk
Risk of casehardening: no
Risk of checking: slight risk
Risk of collapse: no

Note: Must be dried carefully in order to reduce defects.

SAWING AND MACHINING

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

Note: Some difficulties in presence of interlocked grain.

ASSEMBLING

Nailing / screwing: good
Gluing: correct

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

Veneer for interior of plywood
Formwork
Interior panelling
Blockboard
Light carpentry
Wood frame house

Veneer for back or face of plywood
Interior joinery
Boxes and crates
Fiber or particle boards
Glued laminated
Seats
<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>Country</th>
<th>Local name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congo</td>
<td>KOMA</td>
<td>Gabon</td>
<td>OSSABEL</td>
</tr>
</tbody>
</table>
### Specific Gravity

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

### Monnin 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
- 75: High

### Modulus of Elasticity (<1000 MPa)

- 6: Low
- 8: Medium
- 10: High

### Resistance to Fungi

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

### Resistance to Dry Wood Insects Borer

- 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%
- 35%
- 45%