Family: FABACEAE-MIMOSOIDEAE (angiosperm)
Scientific name(s): Piptadeniastrum africanum

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: yellow brown
Sapwood: clearly demarcated
Texture: coarse
Grain: interlocked
Interlocked grain: marked

Note: Wood light brown to golden brown, sometimes ribbon like aspect on quartersawn. Ammoniac odour when green or with rewetted woods.

LOG DESCRIPTION

Diameter: from 60 to 120 cm
Thickness of sapwood: from 5 to 15 cm
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>0.70</td>
<td>0.06</td>
<td>57 MPa</td>
<td>6 MPa</td>
</tr>
<tr>
<td>Monnin hardness *:</td>
<td>4.4</td>
<td>1.6</td>
<td>98 MPa</td>
<td>13 MPa</td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage:</td>
<td>0.55 %</td>
<td>0.10 %</td>
<td>15190 MPa</td>
<td>2027 MPa</td>
</tr>
<tr>
<td>Total tangential shrinkage (TS):</td>
<td>8.5 %</td>
<td>1.2 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total radial shrinkage (RS):</td>
<td>3.8 %</td>
<td>0.6 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS/RS ratio:</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point:</td>
<td>27 %</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stability: moderately stable

MECHANICAL AND ACOUSTIC PROPERTIES

Crushing strength *: 57 MPa
Static bending strength *: 98 MPa
Modulus of elasticity *: 15190 MPa

Musical quality factor: 106.9 measured at 2556 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 3 - 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 3 - poorly permeable
Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)
Species covering the use class 5: No

Note: Resistance to fungi: moderate to good. Heart not resistant.

REQUIREMENT OF A PRESERVATIVE TREATMENT

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

Note: To reduce distortions, surface drying is recommended prior to kiln drying.

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: good
Slicing: not recommended or without interest

Note: Very irritant sawdust. Quartersawn is recommended in order to reduce the risks of distortion.

ASSEMBLING

Nailing / screwing: good
Gluing: correct

Note: Risks of end checks.

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 lumber: 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

Heavy carpentry: Wood frame house
Vehicle or container flooring: Exterior panelling
Industrial or heavy flooring: Stairs (inside)
Glued laminated: Current furniture or furniture components
Veneer for interior of plywood: Veneer for back or face of plywood

Note: Can be used as substitute for OAK (Quercus spp.) for some end-uses. The unpleasant odour of this wood when green, or rewetted, must be taken into account according to the type of end-uses and the destination.
<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>Country</th>
<th>Local name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>N'SINGA</td>
<td>Benin</td>
<td>GLENREN</td>
</tr>
<tr>
<td>Cameroon</td>
<td>ATUI</td>
<td>Congo</td>
<td>N'SINGA</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>DABEMA</td>
<td>Gabon</td>
<td>TOUM</td>
</tr>
<tr>
<td>Ghana</td>
<td>DAHOMA</td>
<td>Equatorial Guinea</td>
<td>TOM</td>
</tr>
<tr>
<td>Liberia</td>
<td>MBELI</td>
<td>Nigeria</td>
<td>AGBOIN</td>
</tr>
<tr>
<td>Nigeria</td>
<td>EKHI MI</td>
<td>Uganda</td>
<td>MPEWERE</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>MOKOUNGOU</td>
<td>Democratic Republic of the Congo</td>
<td>BOKUNGU</td>
</tr>
<tr>
<td>Democratic Republic of the Congo</td>
<td>LIKUNDU</td>
<td>Sierra Leone</td>
<td>MBELE-GULI</td>
</tr>
<tr>
<td>Netherlands</td>
<td>BUKUNGU</td>
<td>United Kingdom</td>
<td>DAHOMA</td>
</tr>
</tbody>
</table>
### Table of Wood Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity</td>
<td>0.2 - 1.2</td>
</tr>
<tr>
<td>Monnin hardness</td>
<td>1 - 20</td>
</tr>
<tr>
<td>Coefficient of volumetric shrinkage (%)</td>
<td>0.3 - 0.8</td>
</tr>
<tr>
<td>Total tangential shrinkage (%)</td>
<td>4 - 12</td>
</tr>
<tr>
<td>Total radial shrinkage (%)</td>
<td>2 - 10</td>
</tr>
<tr>
<td>Crushing strength (MPa)</td>
<td>10 - 110</td>
</tr>
<tr>
<td>Static bending strength (MPa)</td>
<td>25 - 200</td>
</tr>
<tr>
<td>Modulus of elasticity (&lt;1000 MPa)</td>
<td>6 - 32</td>
</tr>
</tbody>
</table>

### 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%