Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)
Scientific name(s): Dimorphandra polyandra
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: brown
Sapwood: not clearly demarcated
Texture: coarse
Grain: straight or interlocked
Interlocked grain: slight

LOG DESCRIPTION

Diameter: from 60 to 75 cm
Thickness of sapwood: from 4 to 6 cm
Floats: no
Log durability: moderate (treatment recommended)

DESCRIPTION

Color: brown
Sapwood: not clearly demarcated
Texture: coarse
Grain: straight or interlocked
Interlocked grain: slight

Note: Logs are frequently irregularly shaped. Frequent brittleheart.
Wood light yellow when sawn, quickly turning light brown to brown or reddish brown. Grain usually straight but sometimes slight irregular interlocked grain.

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>0,71</td>
<td>0,02</td>
</tr>
<tr>
<td>Monnin hardness *:</td>
<td>3,9</td>
<td>0,7</td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage:</td>
<td>0,57 %</td>
<td>0,08 %</td>
</tr>
<tr>
<td>Total tangential shrinkage (TS):</td>
<td>8,2 %</td>
<td>1,1 %</td>
</tr>
<tr>
<td>Total radial shrinkage (RS):</td>
<td>4,6 %</td>
<td>1,3 %</td>
</tr>
<tr>
<td>TS/RS ratio:</td>
<td>1,8</td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point:</td>
<td>27 %</td>
<td></td>
</tr>
</tbody>
</table>

Stability: moderately stable to stable

MECHANICAL AND ACOUSTIC PROPERTIES

Crushing strength *: 62 MPa 4 MPa
Static bending strength *: 107 MPa 81 MPa
Modulus of elasticity *: 15100 MPa 1221 MPa

Musical quality factor: 137,7 measured at 2537 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: susceptible - sapwood not or slightly demarcated (risk in all the wood)
- Termites (according to E.N. standards): class M - moderately durable
- Treatability (according to E.N. standards): no information available
- 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
Risk of distortion: high risk
Risk of casehardening: no
Risk of checking: slight risk
Risk of collapse: no

SAWING AND MACHINING

Blunting effect: normal
Sawteeth recommended: ordinary or alloy steel
Cutting tools: ordinary
Peeling: not recommended or without interest
Slicing: not recommended or without interest
Note: Possible presence of internal stresses. Low yield < 30% (brittleheart).

ASSEMBLING

Nailing / screwing: good
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

Exterior joinery
Current furniture or furniture components
Boxes and crates
Interior joinery
Light carpentry
## 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>Guyana</td>
<td>DAKAMA</td>
<td>French Guiana</td>
<td>AIEOUEKO</td>
</tr>
<tr>
<td>Suriname</td>
<td>ANJAMA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Mechanical Properties

<table>
<thead>
<tr>
<th>Specific gravity</th>
<th>Very light</th>
<th>Light</th>
<th>Medium</th>
<th>Heavy</th>
<th>Very heavy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monnin hardness</td>
<td>Very soft</td>
<td>Soft</td>
<td>Medium</td>
<td>Hard</td>
<td>Very hard</td>
</tr>
<tr>
<td>Coefficient of volumetric shrinkage (%)</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total tangential shrinkage (%)</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total radial shrinkage (%)</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crushing strength (MPa)</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static bending strength (MPa)</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modulus of elasticity (&lt;1000 MPa)</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Resistance Properties

<table>
<thead>
<tr>
<th>Resistance to fungi</th>
<th>Not durable</th>
<th>Poorly durable</th>
<th>Moderately durable</th>
<th>Durable</th>
<th>Very durable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to dry wood insects borers</td>
<td>Susceptible</td>
<td>Durable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to termites</td>
<td>Susceptible</td>
<td>Moderately durable</td>
<td>Durable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Treatment Properties

| Treatability | Not permeable | Poorly permeable | Moderately permeable | Easily permeable |

## Stability

| Stability | Poorly stable | Moderately stable | Stable |

## Fibers Saturation Point

<table>
<thead>
<tr>
<th>15%</th>
<th>Low</th>
<th>25%</th>
<th>Medium</th>
<th>35%</th>
<th>High</th>
<th>45%</th>
</tr>
</thead>
</table>