Family: APOCYNACEAE (angiosperm)
Scientific name(s): Dyera costulata
Dyera polyphylla
Dyera lowii (synonymous)
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light yellow
Sapwood: not demarcated
Texture: fine
Grain: straight
Interlocked grain: absent
Note: Brittleheart.

LOG DESCRIPTION

Diameter: from 80 to 120 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

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></th>
<th>Mean</th>
<th>Std dev.</th>
<th>Mean</th>
<th>Std dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity *:</td>
<td>0.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monnin hardness *:</td>
<td>1.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coeff. of volumetric shrinkage:</td>
<td>0,35 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total tangential shrinkage (TS):</td>
<td>5,5 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total radial shrinkage (RS):</td>
<td>2,3 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS/RS ratio:</td>
<td>2,4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber saturation point:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability: stable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MECHANICAL AND ACOUSTIC PROPERTIES

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing strength *:</td>
<td>27 MPa</td>
<td></td>
</tr>
<tr>
<td>Static bending strength *:</td>
<td>45 MPa</td>
<td></td>
</tr>
<tr>
<td>Modulus of elasticity *:</td>
<td>10040 MPa</td>
<td></td>
</tr>
</tbody>
</table>

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

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 5 - not durable
Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)
Termites (according to E.N. standards): class 5 - susceptible
Treatability (according to E.N. standards): class 1 - easily permeable
Use class ensured by natural durability: class 1 - inside (no dampness)
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: rapid
Risk of distortion: no risk or very slight risk
Risk of casehardening: no
Risk of checking: slight risk
Risk of collapse: no

Note: Risks of surface checks due to latex canals. Risks of blue stain. Pocket moisture in thick material.

Possible drying schedule: 2

<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>50</td>
<td>47</td>
</tr>
<tr>
<td>40</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>30</td>
<td>55</td>
<td>47</td>
</tr>
<tr>
<td>20</td>
<td>70</td>
<td>55</td>
</tr>
<tr>
<td>15</td>
<td>75</td>
<td>58</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: good
Slicing: nood

Note: The latex may clog sawteeth. Keep sharp cutting edges in order to obtain a smooth surface.

ASSEMBLING

Nailing / screwing: poor
Gluing: correct

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to MGR grading rules (2009)
Possible grading: Prime, Select, Standard, Serviceable, Utility

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
Boxes and crates
Interior joinery
Blockboard
Matches
Sliced veneer

Veneer for back or face of plywood
Moulding
Interior panelling
Pencils
Current furniture or furniture components
Sculpture

Note: Can be used as substitute for OBECHE (Triplochiton scleroxylon) and POPLAR (Populus spp.).
### 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>Indonesia</td>
<td>DJELUTONG</td>
<td>Indonesia</td>
<td>JELUTONG</td>
</tr>
<tr>
<td>Indonesia</td>
<td>MELABUWAI</td>
<td>Peninsular Malaysia</td>
<td>ANDJAROETOENG</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>JELUTONG</td>
<td>Peninsular Malaysia</td>
<td>JELUTONG BUKIT</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>JELUTONG PAYA</td>
<td>Peninsular Malaysia</td>
<td>LEETOENG</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>PANTOENG</td>
<td>Malaysia (islands)</td>
<td>JELUTONG</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
- 12: 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 %: Low
- 25 %: Medium
- 35 %: High
- 45 %: Very high