**WOOD DESCRIPTION**

**LOG DESCRIPTION**

<table>
<thead>
<tr>
<th>Color: dark red</th>
<th>Diameter: from 60 to 120 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sapwood: clearly demarcated</td>
<td>Thickness of sapwood: from 4 to 8 cm</td>
</tr>
<tr>
<td>Texture: medium</td>
<td>Floats: no</td>
</tr>
<tr>
<td>Grain: interlocked</td>
<td>Log durability: moderate (treatment recommended)</td>
</tr>
<tr>
<td>Interlocked grain: marked</td>
<td>Note: Wood pink brown to dark red or purplish brown, with white resin streaks (especially NEMESU).</td>
</tr>
</tbody>
</table>

**PHYSICAL PROPERTIES**

- Specific gravity *:* 0,68
- Monnin hardness *:* 2,5
- Coeff. of volumetric shrinkage: 0,49 %
- Total tangential shrinkage (TS): 7,6 %
- Total radial shrinkage (RS): 4,0 %
- TS/RS ratio: 1,9
- Fiber saturation point: 26 %
- Stability: stable

**MECHANICAL AND ACOUSTIC PROPERTIES**

- Mean |
  - Crushing strength *:* 52 MPa |
  - Static bending strength *:* 92 MPa |
  - Modulus of elasticity *:* 13020 MPa

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

- Musical quality factor: 123,6 measured at 2739 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 2 to class 4 - durable to poorly durable
  - Dry wood borers: durable - sapwood demarcated (risk limited to sapwood)
- Termites (according to E.N. standards): class M - moderately durable
- Treatability (according to E.N. standards): class 4 - not permeable
- Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)
- Species covering the use class 5: No

Note: Variable durability (due to a variable specific gravity) according to species. Variable treatability.

**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  
Risk of distortion: slight risk  
Risk of casehardening: no  
Risk of checking: slight risk  
Risk of collapse: no  

Note: Thin sawnwoods must be stacked carefully with the appropriate number of spacer sticks in order to prevent risks of distortion.

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: fairly high  
Sawteeth recommended: stellite-tipped  
Cutting tools: tungsten carbide  
Peeling: good  
Slicing: nod  

Note: Some risks of tearing in presence of interlocked grain. Ribbon like aspect. Wood may be siliceous.

**ASSEMBLING**

Nailing / screwing: good  
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**

Exterior joinery  
Interior panelling  
Veneer for interior of plywood  
Current furniture or furniture components  
Light carpentry  
Vehicle or container flooring  
Turned goods  
Sculpture  
Cabinetwork (high class furniture)  

Exterior joinery  
Interior panelling  
Veneer for back or face of plywood  
Flooring  
Glued laminated  
Open boats  
Wood-ware  
Sliced veneer  

Note: Frequent black holes and brittleheart. The presence of white resin canals may be prejudicial to the aspect of the wood for some end-uses.
### 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>MERAH-TUA</td>
<td>Indonesia</td>
<td>MERANTI BUNGA</td>
</tr>
<tr>
<td>Indonesia</td>
<td>MERANTI KETUNG</td>
<td>Indonesia</td>
<td>RED MERANTI</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>BINATOH</td>
<td>Peninsular Malaysia</td>
<td>DARK RED MERANTI</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>DARK RED SERAYA</td>
<td>Peninsular Malaysia</td>
<td>ENGBANG CHENAK</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>MERANTI BUNGA SENGAWAN</td>
<td>Peninsular Malaysia</td>
<td>OBA SULUK</td>
</tr>
<tr>
<td>Peninsular Malaysia</td>
<td>SERAYA BUKIT</td>
<td>Peninsular Malaysia</td>
<td>SERAYA DAUN</td>
</tr>
<tr>
<td>Malaysia (islands)</td>
<td>DARK RED MERANTI</td>
<td>Malaysia (islands)</td>
<td>MERANTI BUKIT</td>
</tr>
<tr>
<td>Malaysia (islands)</td>
<td>MERANTI DAUN BASAR</td>
<td>Malaysia (islands)</td>
<td>NEMESU</td>
</tr>
</tbody>
</table>
### MERANTI DARK RED

#### Specific Gravity
- 0.2: Very light
- 0.3: Light
- 0.4: Medium
- 0.5: Heavy
- 0.7: 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
- 5: High

#### Crushing Strength (MPa)
- 0: Low
- 50: Medium
- 110: High

#### Static Bending Strength (MPa)
- 25: Low
- 100: Medium
- 200: High

#### Modulus of Elasticity (≤1000 MPa)
- 6: Low
- 12: Medium
- 20: 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%: Medium