Family: ARAUCARIACEAE (gymnosperm)
Scientific name(s): Agathis dammara
Agathis alba (synonymous)
Agathis lanceolata
Agathis moorei
Agathis obtusa
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light yellow
Sapwood: not clearly demarcated
Texture: fine
Grain: straight
Interlocked grain: absent

Note: Wood cream white or light yellow with often pink reflection, turns golden brown on exposure. Moiré aspect.

LOG DESCRIPTION

Diameter: from 60 to 120 cm
Thickness of sapwood: from 8 to 11 cm
Floats: yes
Log durability: low (must be treated)

PHYSICAL PROPERTIES

Specific gravity *: 0.53 ± 0.06
Mean Monnin hardness *: 2.5 ± 0.5
Mean Coeff. of volumetric shrinkage: 0.41 ± 0.07%
Mean Total tangential shrinkage (TS): 5.9 ± 1.4%
Mean Total radial shrinkage (RS): 4.0 ± 1.1%
Mean Total tangential shrinkage (TS): 1.5
Mean Total radial shrinkage (RS): 1.5
Mean Fiber saturation point: 30%
Mean Stability: stable

MECHANICAL AND ACOUSTIC PROPERTIES

Crushing strength *: 43 MPa ± 4 MPa
Mean Static bending strength *: 76 MPa ± 9 MPa
Mean Modulus of elasticity *: 11240 MPa ± 1707 MPa
Mean (*: at 12% moisture content, with 1 MPa = 1 N/mm²)
Mean Musical quality factor: 93.7 measured at 2670 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 3-4 - moderately to poorly 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 2 - moderately permeable
Use class ensured by natural durability: class 1 - inside (no dampness)
Species covering the use class 5: No
Note: This species is listed in the European standard NF EN 350-2.
Moderate to good amenability to preservative treatment. Prone to blue stain.

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: Risk of blue stain.

Possible drying schedule: 4

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>M.C. (%)</th>
<th>Air humidity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>dry-bulb</td>
<td>wet-bulb</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>42</td>
<td>39</td>
</tr>
<tr>
<td>50</td>
<td>48</td>
<td>43</td>
</tr>
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<tr>
<td>15</td>
<td>54</td>
<td>46</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.

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**SAWING AND MACHINING**

Blunting effect: normal
Sawteeth recommended: ordinary or alloy steel
Cutting tools: ordinary
Peeling: good
Slicing: good

Note: Planed surfaces are lustrous.

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**ASSEMBLING**

Nailing / screwing: good
Gluing: correct

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**COMMERCIAL GRADING**

Appearance grading for sawn timbers: According to MGR grading rules (2009)

Possible grading: Prime, Select, Standard, Serviceable, Utility

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**FIRE SAFETY**

Conventional French grading: Thickness > 18 mm : M.3 (moderately inflammable)
Thickness < 18 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.

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**END-USES**

Moulding
Sliced veneer
Interior panelling
Veneer for interior of plywood
Matches
Turned goods
Boxes and crates
Light carpentry

Cabinetwork (high class furniture)
Interior joinery
Current furniture or furniture components
Veneer for back or face of plywood
Cooperage
Shingles
Wood-ware
Glued laminated

Note: Aspect similar to MERISIER (Cerasus avium). Stains well.
### 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>Australia</td>
<td>KAURI</td>
<td>Indonesia</td>
<td>DAMAR BINDANG</td>
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<tr>
<td>Indonesia</td>
<td>DAMAR PILAU</td>
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<td>DAMAR KAPAS</td>
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<td>DAMAR SIGI</td>
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<tr>
<td>Malaysia (islands)</td>
<td>KAURI</td>
<td>Malaysia (islands)</td>
<td>DAMAR MINYAK</td>
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<tr>
<td>Papua New Guinea</td>
<td>KAURI PINE</td>
<td>New Caledonia</td>
<td>KAORI</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>DAMAR MINIAK</td>
<td>Philippines</td>
<td>ALMACIGA</td>
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</table>
### Mechanical 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>Moraia 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% Low
- 25% Medium
- 35% High
- 45% Low

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