Radiata pine

Pinus radiata

Radiata pine, formerly referred to as Monterey pine or insignis pine, is a large softwood native to a very limited area of the west coast of North America but planted widely in the world's south temperate zone, especially in South Africa, Chile, New Zealand and Australia. In Western Australia, major plantations have been established in the south-west on fertile soil and in rainfall areas greater than 700 mm, but preferably south of Perth because further north the thin bark makes the species susceptible to sunscald.

Wood description:

Heartwood is pale yellow-brown, and sapwood pale yellow-white. The texture is fine, with the grain usually straight except for the central core of juvenile wood that often has pronounced spiral grain in the first few years.

Wood density:

Green density is about 1000 kg/m3, and air-dry density about 590 kg/m3 in 30-40 year old and about 480 kg/m3 in 10-20 year old trees. Basic density is about 490 kg/m3 in 30-40 year old and about 405 kg/m3 in 10-20 year old trees.

Drying and shrinkage:

Tangential and radial shrinkage before reconditioning are 5.1 and 3.4 per cent respectively, and after reconditioning 5.0 and 3.5 per cent respectively.

Workability:

The wood is relatively easy to work, but knots and resin pockets are common.

Durability:

Durability Classes based on the CSIRO 1996 ratings are 4 for decay, and 4 for decay + termites.

Strength group and properties:

Green and dry strength groups are S6 and SD6 respectively. The more important strength properties are given in the table below.
<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>Green</th>
<th>Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulus of Rupture</td>
<td>MPa</td>
<td>42</td>
<td>81</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td>MPa</td>
<td>8100</td>
<td>10000</td>
</tr>
<tr>
<td>Max Crushing Strength</td>
<td>MPa</td>
<td>19</td>
<td>42</td>
</tr>
<tr>
<td>Hardness</td>
<td>KN</td>
<td>2.1</td>
<td>3.3</td>
</tr>
</tbody>
</table>

**Availability:**

The timber is readily available in Western Australia and the eastern States.

**Uses:**

Uses are for general construction, house framing, moulding architraves, doors, shelves, joinery and turnery, decorative panelling, furniture, construction plywood, sliced veneer as a facing for particleboard, pulp and paper and reconstituted products e.g. particleboard and medium density fibreboard (MDF). If preservative treated, radiata pine can be used for posts, poles, sleepers, retaining walls, decking, cooling towers and mining timber.