



Tasmanian oak

Tasmanian Oak: *Eucalyptus delegatensis*, *E. obliqua* and *E. regnans*

Other Common names: Australian Ash.

The Timber

Tasmanian Oak is a warm, dense and resilient hardwood. It works extremely well and produces an excellent finish. It can be used in all forms of construction as scantlings, panelling and flooring, and can be glue-laminated to cover long spans. Veneers, plywood and engineered products are available. It is also a popular furniture timber, and Eucalypt fibre is sought after for reconstituted board and production of high quality paper.

Tasmanian Oak is light in colour, varying from straw to reddish brown with intermediate shades of cream to pink. It is recognised for its excellent staining qualities, which allow ready matching with other timbers, finishes or furnishings.

The name Tasmanian Oak was originally used by early European timber workers who believed the eucalypts showed the same strength as English Oak.

The Resource

Tasmanian Oak is the name used for three almost identical species of eucalypt hardwoods that are normally marketed collectively. *E. delegatensis* grows at higher altitudes, while *E. regnans* is found in wetter sites. *E. obliqua* has a wide distribution, occurring in wet forests but also extending into drier areas.

Eucalypts are light demanding and grow best where they are not overshadowed. Regeneration occurs after fire, and seedlings establish best on bare mineral soil in the absence of leaf litter. In Tasmania, eucalypts may live for 400 years or more and regularly attain a height of 70m; some individuals have been recorded as reaching 100m. Old growth trees may be 3-4m or more in diameter.

Over 1 million hectares of eucalypt forest on public land are managed for sustainable multiple uses that include tourism, recreation, timber production, and conservation. There are also 2.7 million hectares of land secured in dedicated reserves in which logging is not permitted. These reserves comprise 40% of the area of the state. A substantial area of forested land is owned privately and managed for its timber production. Approximately 500,000m³ of logs are sawn each year.



Tasmanian Oak Properties

<i>Colour</i>	Generally straw to light, reddish brown.
<i>Grain</i>	Grain is usually straight, open and even. It is occasionally coarse-grained or fiddlebacked. Growth rings are visible and usually conspicuous.
<i>Texture</i>	Uniform and smooth.
<i>Durability</i>	Class 3&4 (AS 1604). When used for exterior applications it should be painted or given a protective coating.
<i>Lyctid susceptibility</i>	Sapwood is generally susceptible. Tasmanian Oak is usually sold free of sapwood.
<i>Sizes</i>	Dressed seasoned timber 40 to 285 mm wide by 12 to 40 mm thick. Undressed seasoned timber 50 to 300 mm wide by 19 to 50 mm thick. Lengths up to 5400 mm long are available, with the bulk of production between 2700 and 4200 mm long.
<i>Density</i>	Approximately 700 kg/m ³ at 12% moisture content. Unseasoned density approximately 1000 kg/m ³ .
<i>Shrinkage¹</i>	Approx. 5.5% radial, 11% tangential before reconditioning; 3.5% radial, 6.5% tangential after reconditioning.
<i>Movement</i>	Between 25% and 5% MC, radial movement is approximately 0.23% per 1% MC change; tangential movement about 0.36% per 1% MC change.
<i>Strength Groups</i>	Seasoned SD3 and SD4, unseasoned S3 and S4.
<i>Joint Group</i>	Seasoned JD3, unseasoned J3.
<i>Structural Grades</i>	Most commonly available stress grades are F17 seasoned, F8 unseasoned.
<i>Toughness (Izod)</i>	13J unseasoned, 18J seasoned.
<i>Hardness (Janka)</i>	4.2kN unseasoned, 5.7kN seasoned.

Early Fire Hazard Indices (AS 1530)

<i>Ignitability</i>	14
<i>Spread of flame</i>	8
<i>Heat evolved</i>	7
<i>Smoke developed</i>	3

Workability

<i>General</i>	Tasmanian Oak is highly resilient and relatively easy to work.
<i>Blunting</i>	Moderate. Can be severe in dense material.
<i>Sawing</i>	Cuts fairly cleanly with moderate feeding force.
<i>Planing</i>	Moderate feeding forces required. Surfaces very smooth and lustrous when working "with" the grain.
<i>Moulding</i>	Surfaces are true and clean, even end grain. Holds edges well.
<i>Boring</i>	Easy to drill. Holes are usually clean and to size.
<i>Rebating + Mortising</i>	Generally produces excellent results.
<i>Turning</i>	Turns well with sharp arrises.
<i>Nailing</i>	Pre-drilling is often necessary in seasoned or denser material. Nails hold well.
<i>Gluing</i>	Glues satisfactorily with most common adhesives.
<i>Bending</i>	A good to fair bending timber. 25mm material bends reasonably well to a radius of 100mm.
<i>Finishing</i>	Readily worked to a smooth, lustrous surface. Most finishes adhere very well. Stains very well.

Notes

¹from green to 12% moisture content (MC)