

Tasmania Timber

Sassafras Properties

Availability & Appearance	
General Availability	Availability is limited, and constrained by location and style of harvesting operations.
Appearance Grade	Available
Plantation	Not available
Structural Grade	Not available
Veneer	Limited (mainly decorative thicknesses)
Sizes	Sassafras is usually available in seasoned. Undressed squares are available up to 75 mm. Most production is of lengths less than 1.8 m.
Colour	The sapwood of Sassafras is white or greyish, the heartwood can be similarly pale or stained black (“blackheart”).
Grain	Grain is fairly straight, even and smooth.
Texture	Fine and uniform.

Density	Unseasoned	Seasoned
Density (per standard)	910 kg/m ³	590 kg/m ³

Seasoned density is based on moisture content of 12%. Unseasoned density is an approximation as it depends on the moisture content at the time of measurement. Measured kg/m³.



Tasmanian timber is sustainably grown, harvested and processed to meet the highest standards in quality and environmental practice.

For further information contact:

Locked Bag 1324, Launceston, Tasmania, 7250
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Durability	
Above-Ground	0-5 yrs
In-Ground	0-7 yrs
Susceptible to Lyctid Borer	No
Marine Borer Resistance	0-20 yrs (usually 5 yrs)
Termite Resistant	No

Species Specific Notes: Sassafras is not included in AS 5604-2005 Timber - Natural durability ratings. It has good durability for decorative, architectural and structural applications internally but is not recommended for external use. The in-ground durability of heartwood is low. Sapwood is not susceptible to Lyctid Borer.

Durability is defined as the inherent resistance of a timber species to decay, or to insect or marine borer attack. All references to durability refer to the heartwood only. A scale of low to high - durability class 4 = low (0-5yrs); 3 = (5-15yrs); 2 = (15-25yrs) ; 1 = high (25yrs+) - has been adapted for in-ground durability.

Environmental Details	
Resource	Native - Rainforest
Reserves	82% of total Sassafras forest types are reserved.
Certification	Available
Chain of Custody	Available
Carbon Storage	264 kg/m ³
R Values	0.65 (100mm)



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Fire Properties	
Average Specific Extinction Area	< 250 m ² /kg
Bushfire Resistance	BAL-12.5 & 19 – All AS3959 required applications
Fire Properties Group Number: 3	

Species Specific Notes: Fire Properties Group Number is 3 if used on MDF or particleboard ≥ 12mm; veneer thickness 0.6-0.85mm.

Average Specific Extinction Area is determined by the volume of smoke measured over the mass loss of the tested sample per test carried out in accordance with 'Cone Calorimeter Test' AS/NZS 3837. It is measured in units of m²/kg.

Bushfire Attack Level (BAL): Naturally bushfire-resisting timbers are those with inherent bushfire-resisting properties. Some species have been tested and a number are in the process of being tested. Resistance is measured by BAL. BAL-12.5: Ember attack, BAL-19: Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5 and 19 kWm², BAL-29: Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19 and 29 kWm².

Critical Radiance Flux measures the radiant (heat) energy required to sustain burning. It is used in Australia to regulate floor coverings. The requirements are set out in BCA Specification C1.10a, providing CRF values for floor coverings based on Class of building, the location within the building (general use or use in fire isolated exits) and whether or not the building is sprinkler protected or not. CRF is measured in kW/m².

Smoke Development Rate is the speed at which smoke increases as determined by testing flooring materials in accordance with AS ISO 9239.1. The rate is expressed in terms of percent/minutes. For buildings not protected with a sprinkler system, a maximum smoke development rate of 750 percent/minute applies.

EFH Ignitability is a measure of the tendency of a material to ignite measured on a scale of 0-19. An index of 0 indicates that the material did not ignite during the 19 minutes that the test takes. An index of 19 indicates that the material ignited in the first minute.

EFH Smoke-Developed Index is a measure of the concentration (measured by optical density) of smoke a material emits as it burns. It is based on an arbitrary scale of 0 to 10. The higher the index, the greater the hazard from smoke is likely to be.

EFH Spread-of-Flame Index is a material's propensity to burn rapidly and spread flames based on a scale of 0 to 10 where 0 means that the materials will not cause flames to reach the ceiling and 10 indicates that the material could be expected to cause flames to reach the ceiling of a room within 10 seconds of ignition.

Fire Properties Group Number: is rated from 1-4 - 1 (Non-Combustible), 2 (Reasonably Non-Combustible), 3 (Slightly Combustible), 4 (Combustible).

Joint	Unseasoned	Seasoned
Joint Group	J3	JD4

The joint group is a classification of the strength of a species in joint design. The values are from 1 (very high strength) to 6 (very low strength).



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Mechanical Properties	Unseasoned	Seasoned
Hardness (Janka)	2.1 kN	3.4 kN
Impact	10 J	9 J
Maximum Crushing Strength	30 MPa	50 MPa
Modulus of Elasticity (MOE)	10 GPa	12 GPa
Modulus of Rupture (MOR)	55 MPa	85 MPa
Toughness (IZOD)	Low - up to 15 Nm	Low - up to 15 Nm

Modulus of Rupture (MOR) is a measure of maximum stress which timber can momentarily sustain when loaded slowly and continuously as a beam. Measured in MPa.

Modulus of Elasticity (MOE) is of importance in determining the deflection of a beam under load, the greater the stiffness, the less the deflection. Measured in GPa.

Maximum Crushing Strength, also referred to as compression strength, measures the ability of the timber to withstand loads applied on the end grain. Measured in MPa.

Impact provides the Izod value, which is the energy taken in joules (J) to fracture the timber.

Toughness is a measure of timber's ability to resist shocks and blows, and is synonymous with impact strength. It is measured in Nm.

Hardness refers to the Janka hardness test and is a measure of timber's resistance to indentation. This value is as listed on the CSAW website.

Movement	
Radial	0.18% per 1% MC change
Tangential	0.34% per 1% MC change

Radial and tangential movement is the percentage of dimensional change for each 1% moisture content change between about 3% moisture content and the fibre saturation point for the particular species. Between (FSP) 25% and 5%MC. Figures are approximate.



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Shrinkage	
Radial	2.2%
Tangential	5.8%

Tangential shrinkage is the measure of the percentage reduction in dimension from the unseasoned to 12% moisture content condition. Radial shrinkage is perpendicular to the growth rings, it is shrinkage in the direction towards the centre of the tree. Measurement is % value. Green to 12%MC. Figures are approximate.

Stress	Unseasoned	Seasoned
Common Structural Grades	Not Available	Not Available
Structural Grades	S1:F14, S2:F11, S3:F8, S4:F7, S5:F5	S1:F17, S2:F14, S3:F11, S4:F8, S5:F7

A stress grade is defined in AS 1720 as the classification of timber for structural purposes by means of either visual or machine grading. The stress grade indicates the basic working stresses and stiffnesses to be used for structural design purposes. Measured in MPa.

Strength	Unseasoned	Seasoned
Strength Group	S5	SD5

Strength groups are given for unseasoned (S1-S7) and seasoned (SD1-SD8) timber in accordance with AS 2878. S1 and SD1 yield the highest strength and stiffness whereas S7 and SD8 yield the lowest.



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Workability	
General Workability	Works easily and cleanly, and is well suited for turning. It is an excellent bending timber, and has a low tendency to split.
Bending	An excellent bending timber. 25mm material bends well to a radius of 75mm.
Blunting	Moderate.
Boring	Easy to drill. Holes are clean and to size.
Finishing	Readily worked to a smooth, lustrous surface. Most finishes adhere very well. Dark stains tend to look “blotchy”.
Gluing	Glues satisfactorily with most common adhesives.
Moulding	Produces good mouldings.
Nailing	All nail holes must be pre-drilled.
Planing	Moderate feeding forces required.
Rebating + Mortising	Generally produces good results.
Sawing	Cuts cleanly and accurately with standard blades. Rip-sawing requires high feeding forces and low feed rates.
Turning	Turns very well.

Source: Centre for Sustainable Architecture with Wood (CSAW), Wood Solutions



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