

**Darwin Stringybark -
Natural Termite
Resistance Factsheet**

**INDIGENOUS
COMMERCIAL
FORESTRY
OPPORTUNITIES:**

**East Arnhem,
northern Australia**

February 2024

PROJECT NUMBER

VNC506-1920

WARNING -

Aboriginal and Torres Strait Islander readers are advised that the following materials may contain the names, images and voices of deceased persons.

Darwin Stringybark – Natural Termite Resistance

An opportunity for an Indigenous provenance product

Natural termite resistance is the inherent ability of some wood species to withstand termite attack without the need for chemical preservatives or other forms of treatment. High natural durability in some species is due in part to the presence of extractives in the heartwood which can be both toxic and/or repellent to termites.

Darwin Stringybark (*Eucalyptus tetradonta*) is a species known to possess high natural durability due to its extractives content and additional properties such as high density and hardness. It is rated a Durability Class 1 timber for above-ground and in-ground use which means the heartwood will be naturally resistant to termite attack and decay for more than 25 years.

Coptotermes acinaciformis is Australia's most economically important termite and *Mastotermes darwiniensis*, the giant northern termite, is by far the most destructive termite in the country. These and other wood eating species will potentially cause significant damage to any timber product that is not treated or does not have high natural durability.



Subterranean termites forage underground and can remain undetected if attacking timber below ground level. When attacking timber above ground they need to construct earthen tubes to reach the food source but can remain relatively hidden before significant damage occurs. Having a timber product such as Darwin Stringybark with a Class 1 durability rating will counteract the secretive nature of subterranean termites with their ability to cause substantial damage while hidden from view.

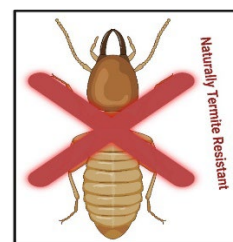
Properties of Darwin Stringybark

| | |
|----------------------------------|----------------------------|
| Fungal Resistance Rating | Excellent |
| Weather Resistance Rating | Excellent |
| Termite Rating | Resistant |
| Wood recovery | 44% (of total log volume) |
| In Ground Durability Estimate | More than 25 years |
| Above Ground Durability Estimate | More than 40 years |
| Toughness | High (25Nm) |
| Density | 900-1200 kg/m ³ |
| Strength Group | S1 (highest on scale) |
| Stress Grade | F34 (highest on scale) |
| Hardness (Janka) | 9.5 (very high) |
| Max Crushing Strength | 81 MPa (very high) |

Darwin Stringybark is suitable for a whole range of internal (flooring and decking) and external (poles, bollards, piles, sleepers, and pergolas) applications where termites can gain access and remain undiscovered. But with a high termite resistance rating, due to its inbuilt natural durability, Darwin Stringybark is the ideal timber to use in termite prone environments where a chemical preservative or other form of treatment is undesirable, potentially costly, and not warranted.

Natural Termite Resistance of Darwin Stringybark

- Imparted by toxic and/or repellent extractives in the heartwood
- Sapwood is not protected from termite attack
- Protection from all termite species in Australia
- Darwin Stringybark resistant to termite attack >25 years
- No additional timber treatment necessary
- Preservative free – natural termite proofing
- Ideal for sensitive environments – environmentally friendly



This research was sub-contracted to the Department of Agriculture and Fisheries by the University of the Sunshine Coast from Forest and Wood Products Australia.

References and further information: Wood Solutions 2022 *Darwin Stringybark* <https://www.woodsolutions.com.au/wood-species/darwin-stringybark>; Dr Rob McGavin, Mr Thomas Davies and Mr Dan Field, 2022, Indigenous Commercial Forestry Opportunities – East Arnhem, Roundwood and veneer processing investigations, Queensland Department of Agriculture and Fisheries, Brisbane.