

# Purpleheart



## Scientific Name(s)

*Peltogyne spp.*

## Family

FABACEAE-CAESALPINIOIDEAE  
(angiosperm)

## Commercial Restriction

No commercial restriction

Purpleheart decking is a stunning and distinctive outdoor decking material known for its vibrant purple colour and exceptional durability. The wood's striking purple hue, which deepens over time, adds a unique and luxurious touch to any outdoor living space.

Purpleheart decking is highly resistant to rot, decay, and insect damage, making it well-suited for outdoor applications. The wood's natural oils contribute to its durability, ensuring that it can withstand heavy foot traffic and various weather conditions without compromising its strength.

Beyond its captivating appearance, Purpleheart decking offers excellent dimensional stability. It resists warping, cupping, and twisting, even in the face of changing humidity levels and temperature fluctuations, ensuring a long-lasting and level deck.

While Purpleheart decking naturally weathers to a silver-grey patina when exposed to sunlight, many homeowners opt to maintain its vibrant purple colour by applying a UV-resistant sealant or finish. This protective coating not only helps preserve the wood's original hue but also provides additional resistance against fading caused by prolonged sun exposure.

## Wood Description

**Color:** purple  
**Sapwood:** clearly demarcated  
**Texture:** medium  
**Grain:** straight  
**Interlocked grain:** absent

**Note:** Purple wood turns to dark brown with light. Possible presence of internal stresses.

## Log Description

**Diameter:** from 50 to 90cm  
**Thickness of sapwood:** from 5 to 10cm  
**Floats:** no  
**Log durability:** moderate (treatment recommended)



## Physical, Mechanical and Acoustic Properties

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

**Stability:** moderately stable

**Musical quality factor:** 168,4 measured at 2890 Hz

(\*: at 12% moisture content, with 1 MPa = 1 N/mm<sup>2</sup>)

	Mean	Std dev.
Specific gravity *:	0,87	0,08
Monnin hardness *:	7,6	1,4
Coeff. of volumetric shrinkage:	0,58%	0,07%
Total tangential shrinkage (TS):	6,70%	0,90%
Total radial shrinkage (RS):	4,40%	0,80%
TS/RS ratio:	1,50%	
Fiber saturation point:	23%	
Crushing strength *:	80MPa	9MPa
Static bending strength *:	141MPa	19MPa
Modulus of elasticity *:	21250MPa	2220MPa

## Requirement of a Preservative Treatment

**Against dry wood borer attacks:** does not require any preservative treatment

**In case of risk of temporary humidification:** does not require any preservative treatment

**In case of risk of permanent humidification:** use not recommended

## 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 2-3  
- durable to moderately durable

**Dry wood borers:** durable - sapwood demarcated (risk limited to sapwood)

**Termites (according to E.N. standards):** class D  
- durable

**Treatability (according to E.N. standards):** class 4  
- not permeable

**Use class ensured by natural durability:** class 3  
- not in ground contact, outside

**Species covering the use class 5:** no

**Note:** This species is listed in the European standard NF EN 350-2. Resistance to decay: moderate to good. According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

## Drying

**Drying rate:** normal to slow

**Risk of distortion:** slight risk

**Risk of casehardening:** no

**Risk of checking:** slight risk

**Risk of collapse:** no

**Possible drying schedule:** 4

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.

M.C. (%)	Temperature (°C)		
	Dry-bulb	Wet-bulb	Air humidity (%)
Green	42	39	82
50	42	43	74
40	48	43	74
30	48	43	74
15	54	46	63

## Sawing And Machining

**Blunting effect:** fairly high

**Sawteeth recommended:** stellite-tipped

**Cutting tools:** tungsten carbide

**Peeling:** not recommended or without interest

**Slicing:** nood

**Note:** Requires power.

## Commercial Grading

### Appearance grading for sawn timbers:

- According to NHLA grading rules (January 2007)

- **Possible grading:** FAS, Select, Common 1, Common 2, Common 4

- In French Guiana, the local name of this species is "AMARANTE". Grading is done according to local rules "Bois guyanais classés".

- **Possible grading:** Choix 1, choix 2, choix 3, choix 4

## End-uses

- Cabinetwork (high class furniture)
- Sliced veneer
- Sculpture
- Ship building (ribs)
- Exterior joinery
- Stairs (inside)
- Glued laminated
- Interior joinery
- Musical instruments
- Tool handles (resilient woods)
- Current furniture or furniture components
- Interior panelling
- Flooring
- Ship building (planking and deck)
- Exterior panelling
- Heavy carpentry
- Vehicle or container flooring
- Turned goods
- Wood-ware

**Note:** In the USA, AMARANTE is used to make high class coffins.

## Assembling

**Nailing / screwing:** good but pre-boring necessary

**Gluing:** correct

**Note:** Tends to split when nailing.

## Fire Safety

### Conventional French grading:

- **Thickness > 14 mm:** M.3 (moderately inflammable)

- **Thickness < 14 mm:** M.4 (easily inflammable)

**Euroclasses grading:** D s2 d0

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. Given according to procedures given by European standard NF EN 13501-1 (september 2007). European grading report done by CSTB with the following number : RA05-0238A.

## Main Local Names

Country	Local Name
Brazil (Amazon)	Guarabu
Brazil (Amazon)	Pau Roxo
Colombia	Tananeo
Guyana	Purpleheart
French Guiana	Bois Violet
Suriname	Purpleheart
Venezuela	Zapatero
United States of America	Amaranth
Brazil (Amazon)	Ipe Roxo
Brazil (Amazon)	Roxinho
Guyana	Koroborelli
French Guiana	Amarante
Panama	Nazanero
Venezuela	Moradp
Germany	Violettholz