

Purpleheart

Family. Leguminosae (Caesalpiniaceae)

Botanical Name(s).

Peltogyne spp.

Continent. Latin America

CITES. This species is not listed in the CITES Appendices (Washington Convention 2023).

Description of logs

Diameter. From 50 to 90 cm

Thickness of sapwood. From 5 to 10 cm

Floats. No

Log durability. Moderate (treatment recommended)

Description of wood

Colour reference. Purple

Sapwood. Clearly demarcated

Texture. Medium

Grain. Straight

Interlocked grain. Absent

Notes. Purple wood turns to dark brown with light. Possible presence of internal stresses.

Physics and mechanics

The properties indicated are for mature wood. These properties may vary significantly depending on the origin and growing conditions of the wood.

Property	Average value
Specific gravity ¹	0.87
Monnin hardness ¹	7.6
Coefficient of volumetric shrinkage	0.58 % per %
Total tangential shrinkage (St)	6.7 %
Total radial shrinkage (Sr)	4.4 %
Ratio St/Sr	1.5
Fibre saturation point	23 %
Thermal conductivity (λ)	0.28 W/(m.K)
Lower heating value	18,120 kJ/kg
Crushing strength ¹	80 MPa
Static bending strength ¹	141 MPa
Modulus of elasticity ¹	21,250 MPa

¹ At 12 % moisture content, with 1 MPa = 1 N/mm

Natural durability and preservation

Resistance to fungi. Class 2 to 3 - durable to moderately durable



Flat sawn



Quarter sawn

Resistance to dry wood borers. Class D - durable (sapwood demarcated, risk limited to sapwood)

Resistance to termites. Class D - durable

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 3 - not in ground contact, outside

Notes. This species is listed in the European standard NF EN 350 (2016). Resistance to decay: moderate to good. According to the European standard NF EN 335 (2013), performance length might be modified by the intensity of end-use exposition.

Requirement of a preservative treatment

Against dry wood borer. Does not require any preservative treatment

In case of temporary humidification. Does not require any preservative treatment

In case of permanent humidification. Use not recommended

Drying

Drying rate. Normal to slow

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	50	87	17.0
Prewarm 2	4	> 50	50	86	16.5
Drying		> 50	53	85	15.7
		50 - 40	53	82.0	14.6
		40 - 35	54	78.0	13.4
		35 - 30	55	77.0	12.9
		30 - 27	57	73.0	11.9
		27 - 24	58	68.0	10.7
		24 - 21	60	61.0	9.3
		21 - 18	62	52.0	7.9
		18 - 15	64	43.0	6.6
		15 - 12	65	39.0	6.0
		12 - 9	65	31.0	5.0
		9 - 6	65	28.0	4.5
Conditioning	8		58	(3)	(2)
Cooling	(1)		Stop	(3)	(2)

(1)) Cooling: until the temperature inside the kiln no longer exceeds external temperature by more than 30 °C.

(2) UGL = final H% x 0,8 to 0,9.

(3) Subtract RH from the UGL determined in (2) and temperature, using the Hailwood-Horrobin equation.

Sawing and machining

Blunting effect. Fairly high

Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Not recommended or without interest

Slicing. Good

Notes. Requires power.

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. Tends to split when nailing.

Commercial grading

Appearance grading for sawn timbers.

According to NHLA grading rules (2015) Possible grading: FAS, Select, Common 1, Common 2, Common 3 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

Visual grading for structural applications

According to French standard NF B 52-001-1 (2018), strength class D50 can be provided by visual grading for Pau roxo in French Guiana (Amarante).

Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)

Thickness < 14 mm: M4 (easily inflammable)

Euroclasses grading. C-s2, d0

Grading for solid wood, according to requirements of European standard EN 14081-1+A1 (August 2019). It concerns structural graded timber in vertical uses and ceiling with mean density upper 0.35 and thickness upper 22 mm.

Assigned according to procedures of the European standard EN 13501-1 (décembre 2018).

Relevant European grading report N°RA05-0238A prepared by CSTB.

End-uses

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

Notes. In the USA, AMARANTE is used to make high class coffins.



Decorative solid wood panels

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Main local names

Country	Local name
Brazil	Guarabu
Brazil	Ipe roxo
Brazil	Pau roxo
Brazil	Roxinho
Colombia	Tananeo
French Guiana	Amarante
French Guiana	Bois violet
Germany (importated tropical timber)	Violettholz
Guyana	Koroborelli
Guyana	Purpleheart
Panama	Nazanero
Suriname	Purperhart
United States of America (importated tropical timber)	Amaranth
Venezuela	Morado
Venezuela	Zapatero