Piquiarana

Family. Caryocaraceae

Botanical Name(s).

Caryocar glabrum

Continent. Latin America

CITES. This species is not listed in the CITES Appendices (Washington Convention 2025).

Description of logs

Diameter. From 60 to 100 cm

Thickness of sapwood. From 3 to 5 cm

Floats. No

Log durability. Moderate (treatment recommended)

Description of wood

Colour reference. Yellow brown

Sapwood. Not clearly demarcated

Texture. Coarse

Grain. Interlocked

Interlocked grain. Marked

Notes. Wood yellow brown to light brown. Presence of internal stresses.

Half-quarter sawn

Quarter sawn

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]	0.80
Monnin hardness[1]	5.0
Coefficient of volumetric shrinkage	0.58 % per %
Total tangential shrinkage (St)	9.6 %
Total radial shrinkage (Sr)	5.2 %
Ratio St/Sr	1.8
Fibre saturation point	29 %
Thermal conductivity (λ)	0.26 W/(m.K)
Lower heating value	19,090 kJ/kg
Crushing strength[1]	64 MPa
Static bending strength[1]	109 MPa
Modulus of elasticity[1]	17,640 MPa

[1] At 12 % moisture content, with 1 MPa = 1 N/mm²

Natural durability and heartwood treatability

Resistance of heartwood to xylophagous fungi. Durability class 2 - durable

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Resistance of heartwood to xylophagous dry wood borers. Class S - susceptible (risk in all the wood)

Resistance of heartwood to termites. Class D - durable

Heartwood treatability. Class 3 - poorly permeable

Use class ensured by natural durability of heartwood.

Class 3 - not in ground contact, outside

Notes. This species is listed in the European standard NF EN 350 (2016). Wood not resistant to some cubical rot fungi under tropical climate. 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. Requires appropriate preservative treatment

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

In case of permanent humidification. Use not recommended

Drying

Drying rate. Slow

Risk of distorsion. High risk

Risk of casehardening. Yes

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes. The wood must be dried carefully and slowly in order to reduce defects.

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. Normal

Sawteeth recommended. Ordinary or alloy steel

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Cutting tools. Ordinary

Peeling. Not recommended or without interest

Slicing. Not recommended or without interest

Notes. Sawing and machining require sharp tools in order to avoid a fuzzy surface due to interlocked grain.

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. High specific gravity: gluing must be especially performed in compliance with the code of practice.

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 "Chawari". 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

Strength classes D35 can be provided by visual grading according to French standard NF B 52-001-1 (2018).

Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)
Thickness < 14 mm: M4 (easily inflammable)

Euroclasses grading. D-s2, d0

Default 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.

End-uses

- Cooperage
- Current furniture or furniture components
- Exterior joinery
- Exterior panelling
- Heavy carpentry
- Industrial or heavy flooring
- Ship building (planking and deck)
- Tool handles (resilient woods)
- Vehicle or container flooring
- Wood frame house

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Main local names

Country	Local name
Bolivia	Biqui
Bolivia	Huevo de burro
Brazil	Pequi
Brazil	Piquia
Brazil	Piquia bravo
Brazil	Piquia roxo
Brazil	Piquiarana
Colombia	Almendron
French Guiana	Chawari
French Guiana	Kassagnan
Guyana	Sawari
Peru	Almendra con espinas
Peru	Almendro
Suriname	Sawari
Suriname	Sopo oedoe
Venezuela	Almendra

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