

Canon ball

Family. Lecythydaceae

Botanical Name(s).

Couroupita guianensis

Couroupita subsessilis

Couroupita p.p.

Continent. Latin America

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

Description of logs

Diameter. From 60 to 120 cm

Thickness of sapwood. -

Floats. Yes

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Light yellow

Sapwood. Not demarcated

Texture. Coarse

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Unpleasant odour when green.

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	0.45
Monnin hardness ¹	1.4
Coefficient of volumetric shrinkage	0.43 % per %
Total tangential shrinkage (St)	6.6 %
Total radial shrinkage (Sr)	3.9 %
Ratio St/Sr	1.7
Fibre saturation point	28 %
Thermal conductivity (λ)	0.16 W/(m.K)
Lower heating value	
Crushing strength ¹	33 MPa
Static bending strength ¹	55 MPa
Modulus of elasticity ¹	9,670 MPa

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

Natural durability and preservation



Flat sawn



Quarter sawn

Resistance to fungi. Class 5 - not durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 1 - easily permeable

Use class ensured by natural durability.

Class 1 - inside (no dampness)

Requirement of a preservative treatment

Against dry wood borer. Requires appropriate preservative treatment

In case of temporary humidification. Requires appropriate 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. Possible risks of casehardening. Drying must be done with care and slowly in order to reduce distortions.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	55	84	15.5
Prewarm 2	3	> 50	57	83	15.0
Drying		> 50	60	76	12.5
		50 - 40	60	73.0	11.6
		40 - 35	60	69.0	10.7
		35 - 30	60	62.0	9.5
		30 - 27	63	55.0	8.2
		27 - 24	64	50.0	7.5
		24 - 21	65	46.0	6.9
		21 - 18	65	39.0	6.0
		18 - 15	68	32.0	5.0
		15 - 12	70	29.0	4.5
		12 - 9	70	25.0	4.0
		9 - 6	70	24.0	3.9
Conditioning	6		63	(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

Cutting tools. Ordinary

Peeling. Good

Slicing. Not recommended or without interest

Notes. Tendency to woolliness. Dust causes coughing. Filling is recommended in order to obtain a good finish.

Assembling

Nailing and screwing. Poor

Commercial grading

Appearance grading for sawn timbers.

According to ATIBT grading rules, possible grade: FAS (First And Second), n°1 Common and select, n°2 Common

Visual grading for structural applications

No visual grading for structural applications

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

- Blockboard
- Boxes and crates
- Current furniture or furniture components
- Fiber or particle boards
- Floats
- Formwork
- Interior joinery
- Interior panelling
- Matches
- Moulding
- Veneer for interior of plywood
- Wood-ware

Main local names

Country	Local name
Brazil	Castanha de macaco
Brazil	Macacarecuia
France (importated tropical timber)	Couroupita
French Guiana	Boulet de canon
Guyana	Canon ball
Suriname	Boshcalabas