

Sougué

Family. Chrysobalanaceae

Botanical Name(s).

Parinari excelsa

Parinari holstii (synonymous)

Parinari tenuifolia (synonymous)

Parinari p.p.

Continent. Africa

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

Description of logs

Diameter. From 80 to 120 cm

Thickness of sapwood. From 2 to 3 cm

Floats. No

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Brown

Sapwood. Not clearly demarcated

Texture. Coarse

Grain. Straight to entangled

Interlocked grain. Slight

Notes. Sapwood pale yellow. Heartwood pale red or chocolate brown. Sapwood has a scent of honey when freshly sawn, which disappears on seasoning. Siica deposits in rays cells.

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	0.89
Monnin hardness ¹	6.6
Coefficient of volumetric shrinkage	0.50 % per %
Total tangential shrinkage (St)	10.1 %
Total radial shrinkage (Sr)	6.6 %
Ratio St/Sr	1.5
Fibre saturation point	34 %
Thermal conductivity (λ)	0.29 W/(m.K)
Lower heating value	18,910 kJ/kg
Crushing strength ¹	74 MPa
Static bending strength ¹	135 MPa
Modulus of elasticity ¹	19,340 MPa

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



Quarter sawn



Flat sawn

Natural durability and preservation

Resistance to fungi. Class 4 - poorly durable

Resistance to dry wood borers. Class D - durable (heartw. durable but sapw. not clearly demarcated)

Resistance to termites. Class D - durable

Treatability. Class 2 - moderately permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Notes. This species naturally covers the use class 5 (wood permanently or regularly submerged in salt water, sea water or brackish water) due to its high hardness and silica content. 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. Requires appropriate preservative treatment

In case of permanent humidification. Requires appropriate preservative treatment

Drying

Drying rate. Slow

Risk of distorsion. High risk

Risk of casehardening. No known specific risk

Risk of checking. High 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. High

Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Not recommended or without interest

Slicing. Not recommended or without interest

Notes. High silica content causes dulling of tool edges.

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 the ATIBT grading rules (2017), the main choices are: FAS (First And Second), n°1 Common and select, n°2 Common (see details of these rules on the ATIBT website).

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

- Current furniture or furniture components
- Flooring
- Formwork
- Heavy carpentry
- Hydraulic works (seawater)
- Indoor staircases
- Industrial or heavy flooring
- Interior joinery
- Ship building
- Vehicle or container flooring

Notes. This species naturally covers the use class 5 (end-uses in marine environment or in brackish water) but only class 2 for other uses.

Main local names

Country	Local name
Cameroon	Assila
Côte d'Ivoire	Sougué
Liberia	Kpar
Nigeria	Eshago
Nigeria	Inyi
Senegal	Mampata
Tanzania	Mula
Uganda	Mubura