

Family: LECYTHIDACEAE (angiosperm)

Scientific name(s): Lecythis pisonis

Commercial restriction: no commercial restriction

Note: The Lecythis genus gathers several species with sometimes very different properties than those of Lecythis pisonis (i.e. Lecythis idatimon or Lecythis persistens which have a weak natural durability).

WOOD DESCRIPTION

Color: red brown
Sapwood: clearly demarcated
Texture: medium
Grain: straight or interlocked
Interlocked grain: slight

LOG DESCRIPTION

Diameter: from 50 to 80 cm
Thickness of sapwood: from 2 to 10 cm
Floats: no
Log durability: good

PHYSICAL PROPERTIES

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

	<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,96	0,11
Monnin hardness *:	8,4	3,6
Coeff. of volumetric shrinkage:	0,55 %	0,10 %
Total tangential shrinkage (TS):	9,8 %	1,2 %
Total radial shrinkage (RS):	6,6 %	0,9 %
TS/RS ratio:	1,5	
Fiber saturation point:	28 %	
Stability:	poorly stable	

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	71 MPa	17 MPa
Static bending strength *:	137 MPa	25 MPa
Modulus of elasticity *:	20000 MPa	2500 MPa

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

Musical quality factor: 118,2 measured at 2594 Hz

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 1 - very 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 4 - in ground or fresh water contact

Species covering the use class 5: No

Note: Informations given in the "Natural durability" and "Requirement of a preservative treatment" parts are relative to the Lecythis pisonis species. Some species of the same genus (such as Lecythis idatimon or Lecythis persistens) are sometimes marketed under the name of SAPUCAIA despite a weak durability (durability class 3 or 4).

According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

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: does not require any preservative treatment

DRYING

Drying rate: slow

Possible drying schedule: 5

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: high risk

Risk of collapse: no

Note: Must be dried slowly and carefully to avoid blemishes.
A time of natural drying previous to artificial drying is recommended.

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
30	42	41	94
25	42	39	82
20	48	43	74
15	48	43	74

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.

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

ASSEMBLING

Nailing / screwing: good but pre-boring necessary

Gluing: correct

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to NHLA grading rules (January 2007)

Possible grading: FAS, Select, Common 1, Common 2, Common 3

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)

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

Euroclasses grading: D s2 d0

Default 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.

END-USES

Flooring
Stairs (inside)
Sleepers
Ship building
Wood frame house

Hydraulic works (fresh water)
Exterior joinery
Tool handles (resilient woods)
Turned goods
Vehicle or container flooring

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Brazil	CASTANHA SAPUCAIA	Brazil	SAPUCAIA
Brazil	SAPUCAIA VERMELHA	Colombia	COCO CRISTAL
Colombia	COCO MONO	Ecuador	GUABILLO
Ecuador	YUNJUA	Guyana	MONKEY POT
Guyana	WADADURI	French Guiana	CANARI MACAQUE
French Guiana	KOUATAPATOU	Peru	MACHIN MANGO
Suriname	KOUATAPATOE	Venezuela	COCO DE MONO
Venezuela	OLLA DE MONO		

