

Family: LECYTHIDACEAE (angiosperm)

Scientific name(s): Bertholletia excelsa

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light brown
Sapwood: not clearly demarcated
Texture: medium
Grain: straight or interlocked
Interlocked grain: slight
Note: Presence of traumatic canals.

LOG DESCRIPTION

Diameter: from 60 to 120 cm
Thickness of sapwood: from 3 to 5 cm
Floats: no
Log durability: moderate (treatment recommended)

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 *:	0,77	0,05
Monnin hardness *:	4,4	0,5
Coeff. of volumetric shrinkage:	0,56 %	0,02 %
Total tangential shrinkage (TS):	10,0 %	2,0 %
Total radial shrinkage (RS):	4,9 %	1,0 %
TS/RS ratio:	2,0	
Fiber saturation point:	26 %	
Stability: moderately stable		

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	56 MPa	4 MPa
Static bending strength *:	89 MPa	10 MPa
Modulus of elasticity *:	13950 MPa	370 MPa

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

Musical quality factor: 119,2 measured at 2556 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 3 - moderately durable

Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)

Termites (according to E.N. standards): class M - moderately durable

Treatability (according to E.N. standards): class 3 - poorly permeable

Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)

Species covering the use class 5: No

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: requires appropriate preservative treatment

In case of risk of temporary humidification: requires appropriate preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: rapid to normal

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: no

Note: A period of surface drying prior to kiln drying is recommended in order to reduce the risks of casehardening for thick material.

SAWING AND MACHINING

Blunting effect: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

ASSEMBLING

Nailing / screwing: good

Gluing: correct (for interior only)

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

Interior joinery
Cabinetwork (high class furniture)
Veneer for back or face of plywood
Wood frame house
Vehicle or container flooring

Current furniture or furniture components
Sliced veneer
Heavy carpentry
Flooring
Stairs (inside)

MAIN LOCAL NAMES

Country

Brazil (Amazon)
Brazil (Amazon)
Venezuela

Local name

CASTANHA DO BRASIL
CASTANHEIRO
BRAZIL NUT

Country

Brazil (Amazon)
Colombia
Venezuela

Local name

CASTANHA DO PARA
CASTANA DEL MARANON
JUBIA

