

Common name: CASTANHEIRO

Family: LECYTHIDACEAE

Scientific name(s): Bertholletia excelsa

LOG DESCRIPTION

Diameter: from 60 to 120 cm
Thickness of sapwood: from 3 to 5 cm
Floats: no
Durability in forest : Moderate (treatment recommended)
Note: Presence of traumatic canals.

WOOD DESCRIPTION

Colour: Light brown
Sapwood: Not clearly demarcated
Texture: Medium
Grain: Straight or interlocked
Interlocked grain: Slight

PHYSICAL PROPERTIES

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

MECHANICAL PROPERTIES

	mean	standard deviation		mean	standard deviation
Density *:	0.77 g/cm ³	0.05			
Monnin hardness*:	4.4	0.5	Crushing strength *:	56 MPa	4
Coef of volumetric shrinkage:	0.56 %	0.02	Static bending strength *:	89 MPa	10
Total tangential shrinkage:	10.0 %	2.0	Modulus of elasticity *:	13950 MPa	370
Total radial shrinkage:	4.9 %	1.0			
Fibre saturation point:	26 %				
Stability:	Moderately stable		(* : at 12 % moisture content ; 1 MPa = 1 N/mm ²)		

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.

Fungi: Class 3 moderately durable
Dry wood borers: Susceptible; sapwood not or slightly demarcated (risk in all the wood)
Termites: Class M - Moderately durable
Treatability: 3 - poorly permeable
Use class*: 2 - inside or under cover (dampness possible)

* ensured by natural durability (according EN standards).

MAIN LOCAL NAMES

Countries	Local names
Brazil (Amazon)	CASTANHA DO BRASIL
Brazil (Amazon)	CASTANHA DO PARA
Brazil (Amazon)	CASTANHEIRO
Colombia	CASTANA DEL MARANON
Venezuela	BRAZIL NUT
Venezuela	JUBIA

CASTANHEIRO

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks:	Requires appropriate preservative treatment
In case of temporary humidification risk:	Requires appropriate preservative treatment
In case of permanent humidification risk:	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)

END-USES

Main known end-uses; they must to be implemented according to the code of practice.

Important remark: some end-uses are mentionned for information (traditional, regional or ancient end-uses).

Interior joinery

Current furniture or furniture components

Cabinetwork (high class furniture)

Sliced veneer

Veneer for back or face of plywood

Heavy carpentry

Wood frame house

Flooring

Vehicle or container flooring

Stairs (inside)
