

Family: SIMAROUBACEAE (angiosperm)

Scientific name(s): Simarouba amara

Quassia simarouba (synonymous)

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: creamy white
Sapwood: not demarcated
Texture: coarse
Grain: straight
Interlocked grain: absent

Note: Cream white to light yellow. Sometimes oily veins.

LOG DESCRIPTION

Diameter: from 50 to 90 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

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 *:	0,41	0,04
Monnin hardness *:	1,1	0,5
Coeff. of volumetric shrinkage:	0,36 %	0,08 %
Total tangential shrinkage (TS):	6,3 %	0,6 %
Total radial shrinkage (RS):	2,8 %	0,5 %
TS/RS ratio:	2,3	
Fiber saturation point:	32 %	
Stability: stable		

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	34 MPa	6 MPa
Static bending strength *:	59 MPa	11 MPa
Modulus of elasticity *:	10070 MPa	1711 MPa

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

Musical quality factor: 86,3 measured at 2747 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 5 - not durable

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

Termites (according to E.N. standards): class S - susceptible

Treatability (according to E.N. standards): class 1 - easily permeable

Use class ensured by natural durability: class 1 - inside (no dampness)

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

Risk of distortion: no risk or very slight risk

Risk of casehardening: no

Risk of checking: no risk or very slight risk

Risk of collapse: no

Note: Prone to blue stain before and during drying.

Possible drying schedule: 3

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	60	56	81
30	68	58	61
20	74	60	51
15	80	61	41

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: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

ASSEMBLING

Nailing / screwing: poor

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 4

In French Guiana, the local name of this species is "SIMAROUBA". Grading is done according to local rules "Bois guyanais classés".

Possible grading: Choix 1, choix 2, choix 3, choix 4

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

Veneer for interior of plywood

Boxes and crates

Current furniture or furniture components

Stringed instruments (sounding board)

Matches

Interior panelling

Fiber or particle boards

Note: Filling is recommended in order to obtain a good finish.

Veneer for back or face of plywood

Blockboard

Sliced veneer

Moulding

Turned goods

Interior joinery

Wood-ware

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Bolivia	CHIRIUANA	Brazil (Amazon)	MARUPA
Brazil (Amazon)	MARUPAUBA	Brazil	PARAHYBA
Brazil	PARAIBA	Brazil	TAMANQUEIRA
Colombia	SIMARUBA	Ecuador	CEDRO AMARGO
Ecuador	CUNA	Ecuador	GUITARRO
Guyana	SIMARUPA	French Guiana	SIMAROUBA
Peru	MARUPA	Suriname	SOEMAROEBA
Venezuela	CEDRO BLANCO	Venezuela	SIMAROUBA
United Kingdom	BITTERWOOD		

