

Family: ARAUCARIACEAE (gymnosperm)

Scientific name(s): Araucaria angustifolia

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light yellow
 Sapwood: not clearly demarcated
 Texture: fine
 Grain: straight
 Interlocked grain: absent
 Note: Frequent purplish pink veins in heartwood.

LOG DESCRIPTION

Diameter: from 80 to 120 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 *:	0,54	0,05
Monnin hardness *:	2,5	0,7
Coeff. of volumetric shrinkage:	0,48 %	0,05 %
Total tangential shrinkage (TS):	7,4 %	1,5 %
Total radial shrinkage (RS):	3,8 %	1,2 %
TS/RS ratio:	1,9	
Fiber saturation point:	27 %	
Stability: moderately stable		

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	54 MPa	8 MPa
Static bending strength *:	89 MPa	14 MPa
Modulus of elasticity *:	12980 MPa	2510 MPa

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

Musical quality factor: 86,2 measured at 2644 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 4-5 - poorly to 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 2 - moderately permeable

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

Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.

Sapwood often very important; end-uses under use class 4 possible with an adequate preservative treatment. Prone to blue stain.

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: requires appropriate preservative treatment

DRYING

Drying rate: normal to slow

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: no

Note: Darker colored wood dries slowly with a strong tendency to cracks and distortions.

Possible drying schedule: 4

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	42	39	82
50	48	43	74
40	48	43	74
30	48	43	74
15	54	46	63

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

Note: Internal stresses in the wood may cause distortion in machining.

ASSEMBLING

Nailing / screwing: good

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 > 18 mm : M.3 (moderately inflammable)

Thickness < 18 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

Light carpentry

Moulding

Boxes and crates

Veneer for interior of plywood

Pulp

Fiber or particle boards

Cooperage

Sliced veneer

Interior panelling

Poles

Flooring

Veneer for back or face of plywood

Current furniture or furniture components

Blockboard

Matches

Cabinetwork (high class furniture)

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Argentina	CURIY	Argentina	PINO PARANA
Brazil (South)	PINHEIRO	Brazil (South)	PINHEIRO DE PARANA
Brazil (South)	PINHEIRO DO BRASIL	Brazil (South)	PINHO BRASILEIRO
Chile	ARAUCARIA	Paraguay	PINHEIRO DO BRASIL
Paraguay	PINO BLANCO	France	PIN PARANA
United Kingdom	ARAUCARIA	United Kingdom	CHILEAN PINE
United Kingdom	PARANA PINE		

