ABARCO

Family: LECYTHIDACEAE (angiosperm)
Scientific name(s): Cariniana pyriformis
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

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

LOG DESCRIPTION

Diameter: from 80 to 120 cm
Thickness of sapwood: from 5 to 7 cm
Floats: yes
Log durability: moderate (treatment recommended)

Note: Heartwood pink brown slightly purplish. Sometimes presence of traumatic canals.

PHYSICAL PROPERTIES

MECHANICAL AND ACOUSTIC PROPERTIES

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

	Mean	Std dev.
Specific gravity *:	0,68	0,03
Monnin hardness *:	4,5	0,6
Coeff. of volumetric shrinkage:	0,49 %	0,06 %
Total tangential shrinkage (TS):	6,6 %	0,5 %
Total radial shrinkage (RS):	4,8 %	0,4 %
TS/RS ratio:	1,4	
Fiber saturation point:	29 %	

Stability: moderately stable

	Mean	Std dev.
Crushing strength *:	61 MPa	3 MPa
Static bending strength *:	113 MPa	7 MPa
Modulus of elasticity *:	13720 MPa	1004 MPa

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

Musical quality factor: 121,4 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 3 - moderately 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 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: does not require any 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: normal to slow
Risk of distortion: slight risk
Risk of casehardening: no
Risk of checking: slight risk
Risk of collapse: no
Note: Sometimes high risks of distortion and checking.

Possible drying schedule: 3

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
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: high
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: good
Slicing: nood
Note: Fairly difficult to saw because of its silica content.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: correct
Note: Tends to split when nailing.

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.

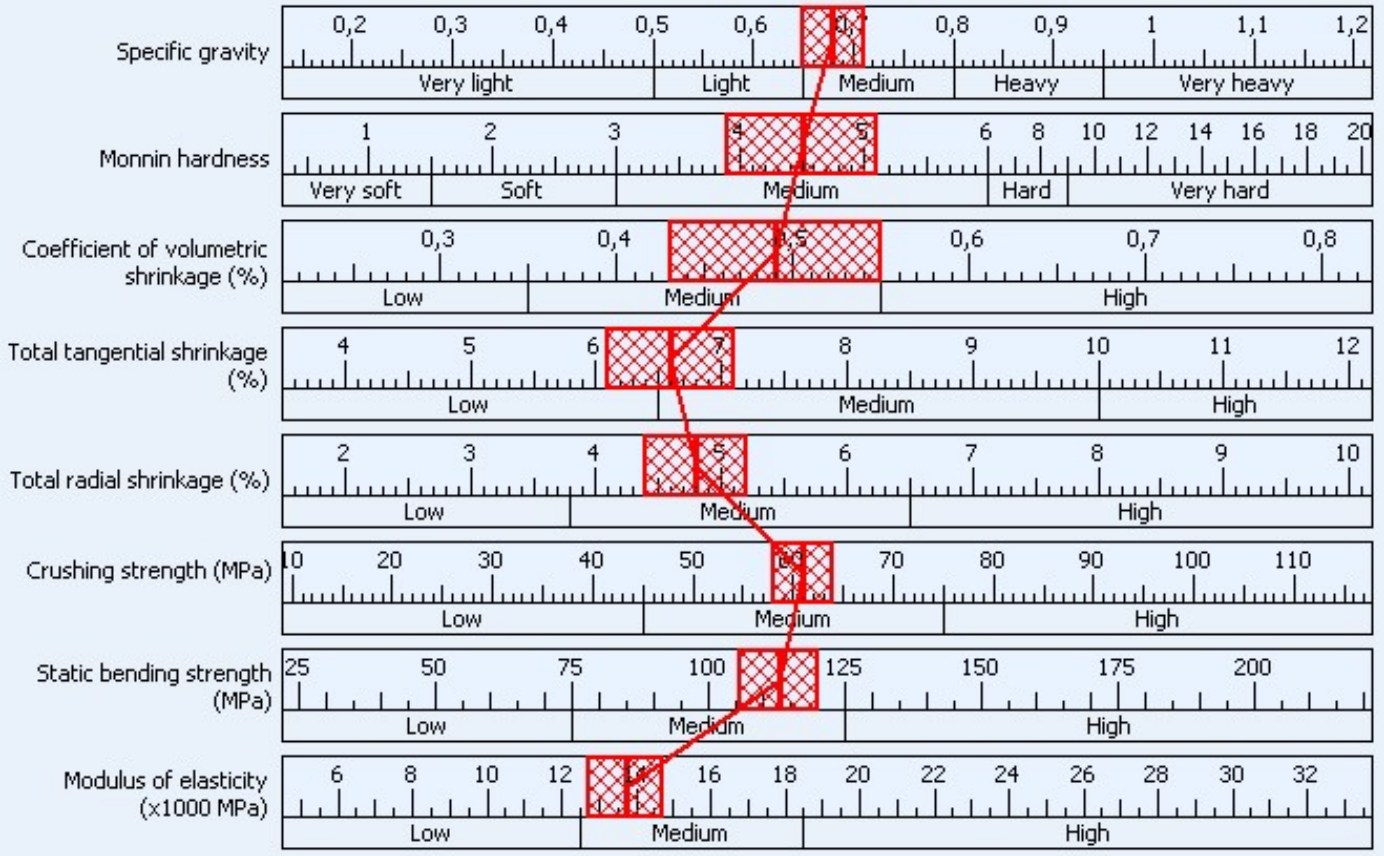
END-USES

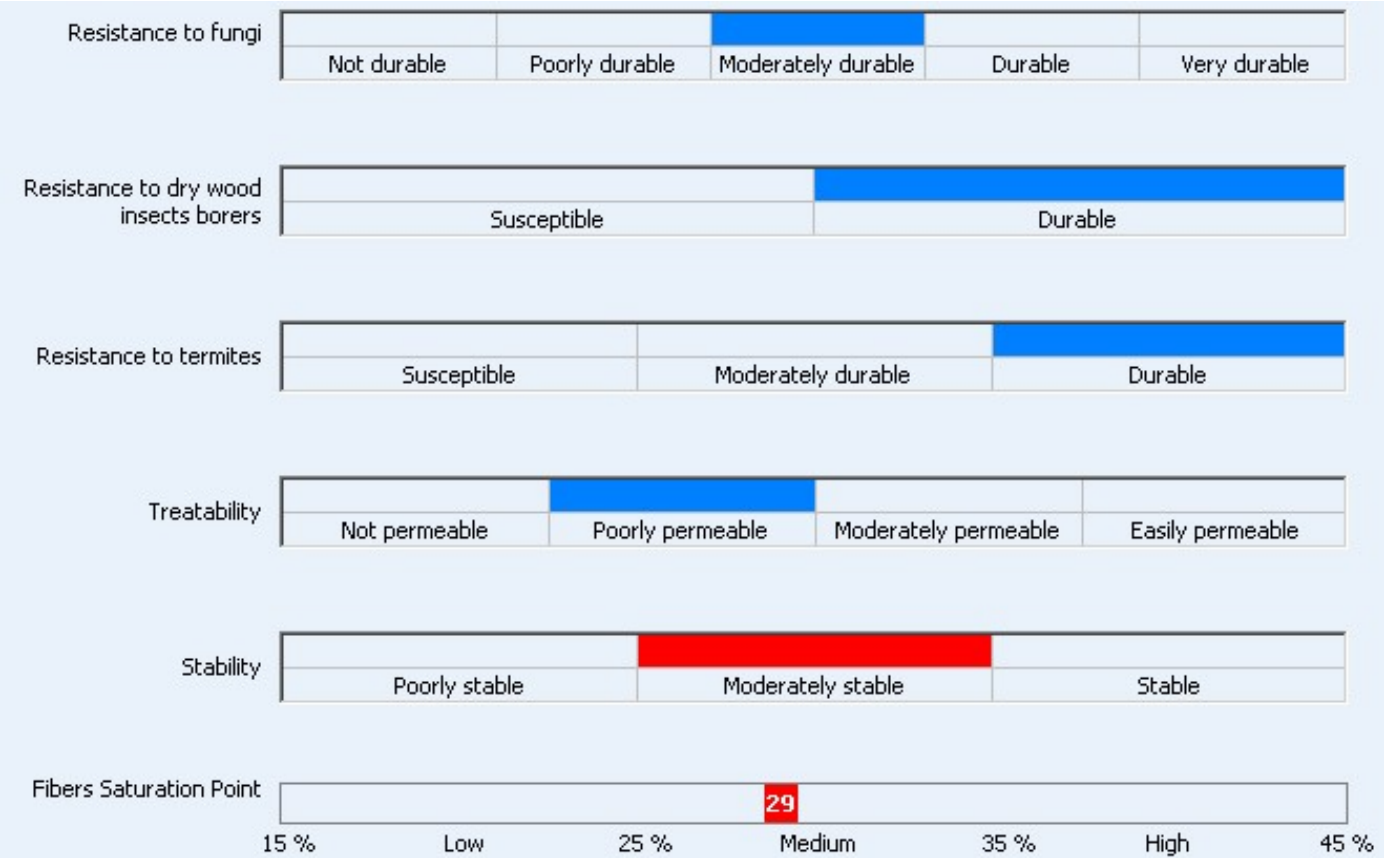
Exterior joinery
Cabinetwork (high class furniture)
Veneer for back or face of plywood
Light carpentry
Wood frame house
Flooring
Turned goods
Interior joinery
Interior panelling
Sliced veneer
Glued laminated
Ship building (planking and deck)
Current furniture or furniture components

Note: Substitute for MAHOGANY (Swietenia spp.) and AFRICAN MAHOGANY (Khaya spp.). Filling is required to obtain a good finish.

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Colombia	ABARCO	Venezuela	BACU


Specific gravity
0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 1,1 1,2
Very light
Light
Medium
Heavy
Very heavy
Monnin hardness
1 2 3 4 5 6 8 10 12 14 16 18 20
Very soft
Soft
Medium
Hard
Very hard
Coefficient of volumetric shrinkage (%)
0,3 0,4 0,5 0,6 0,7 0,8
Low
Medium
High
Total tangential shrinkage (%)
4 5 6 7 8 9 10 11 12
Low
Medium
High
Total radial shrinkage (%)
2 3 4 5 6 7 8 9 10
Low
Medium
High
Crushing strength (MPa)
10 20 30 40 50 70 80 90 100 110
Low
Medium
High
Static bending strength (MPa)
25 50 75 100 125 150 175 200
Low
Medium
High
Modulus of elasticity (x1000 MPa)
6 8 10 12 16 18 20 22 24 26 28 30 32
Low
Medium
High


Resistance to fungi
Not durable
Poorly durable
Moderately durable
Durable
Very durable
Resistance to dry wood insects borers
Susceptible
Durable
Resistance to termites
Susceptible
Moderately durable
Durable
Treatability
Not permeable
Poorly permeable
Moderately permeable
Easily permeable
Stability
Poorly stable
Moderately stable
Stable
Fibers Saturation Point
29
15 %
Low
25 %
Medium
35 %
High
45 %