PAU AMARELO

Family: RUTACEAE (angiosperm)
Scientific name(s): Euxylophora paraensis
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: yellow
Sapwood: not clearly demarcated
Texture: fine
Grain: straight or interlocked
Interlocked grain: slight
Note: Wood bright yellow becoming yellowish light brown with air.

LOG DESCRIPTION

Diameter: from 40 to 80 cm
Thickness of sapwood: from 3 to 5 cm
Floats: no
Log durability: good

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 *:	0,81	
Monnin hardness *:	5,5	
Coeff. of volumetric shrinkage:	0,61 %	
Total tangential shrinkage (TS):	6,5 %	
Total radial shrinkage (RS):	5,7 %	
TS/RS ratio:	1,1	
Fiber saturation point:	21 %	

Stability: poorly stable

	Mean	Std dev.
Crushing strength *:	80 MPa	
Static bending strength *:	119 MPa	
Modulus of elasticity *:	19460 MPa	

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

Musical quality factor: 141,8 measured at 2715 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 1 - very durable
Dry wood borers: heartwood durable but sapwood not clearly demarcated
Termites (according to E.N. standards): class D - durable
Treatability (according to E.N. standards): class 3-4 - poorly or not permeable
Use class ensured by natural durability: class 4 - in ground or fresh water contact
Species covering the use class 5: No
Note: This species is listed in the European standard NF EN 350-2.
The possible presence of few demarcated sapwood may have an influence on the expected durability.
According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: requires appropriate preservative treatment
In case of risk of temporary humidification: does not require any preservative treatment
In case of risk of permanent humidification: does not require any preservative treatment

DRYING

Drying rate: normal to slow

Risk of distortion: slight risk

Risk of casehardening: yes

Risk of checking: high risk

Risk of collapse: no

Note: Risks of cracks and casehardening, especially for thickness > 41 mm.

Possible drying schedule: 4

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
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: no information available

Slicing: nood

Note: Planing and sanding require care in presence of interlocked grain.

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 > 14 mm : M.3 (moderately inflammable)
Thickness < 14 mm : M.4 (easily inflammable)

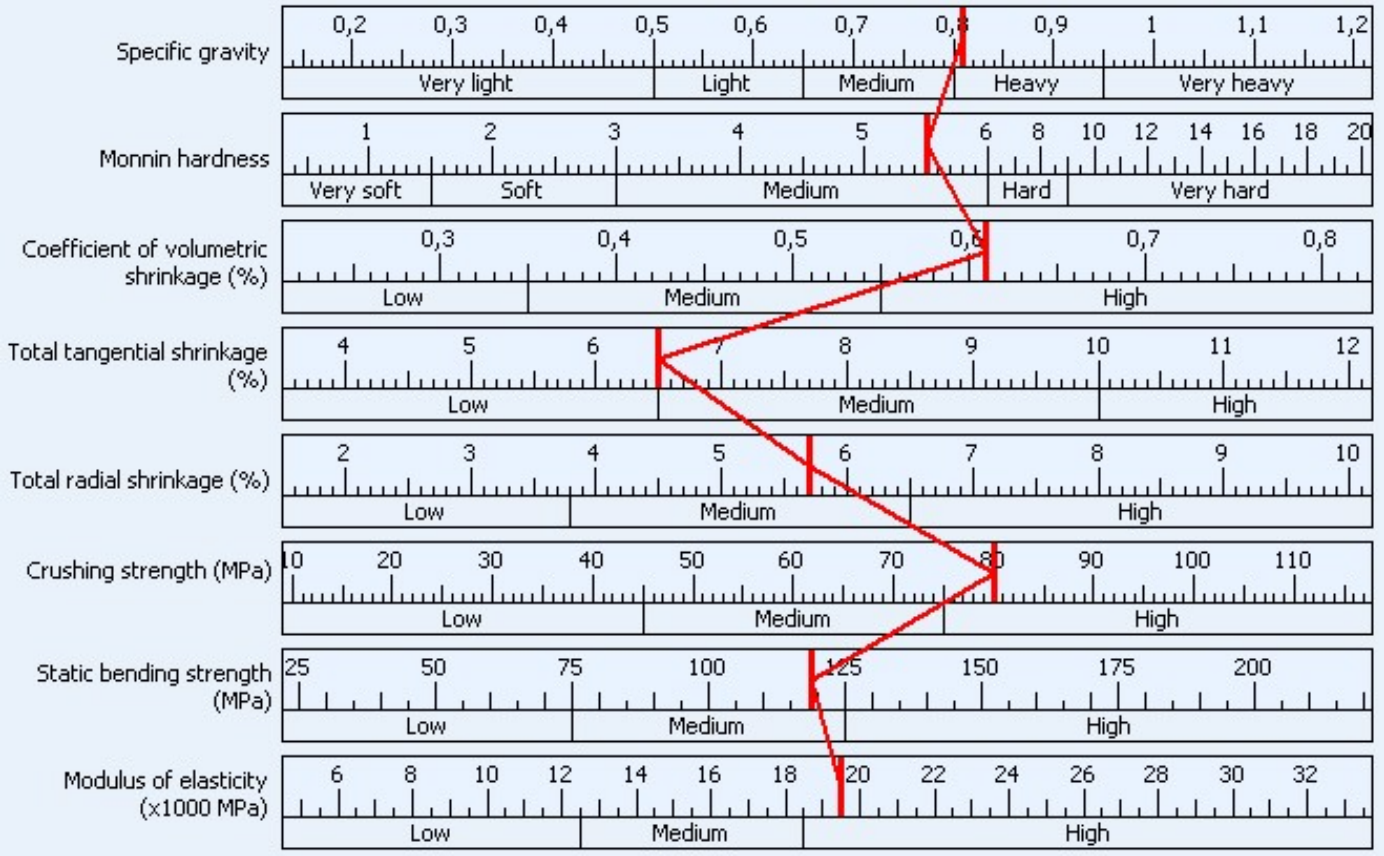
Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

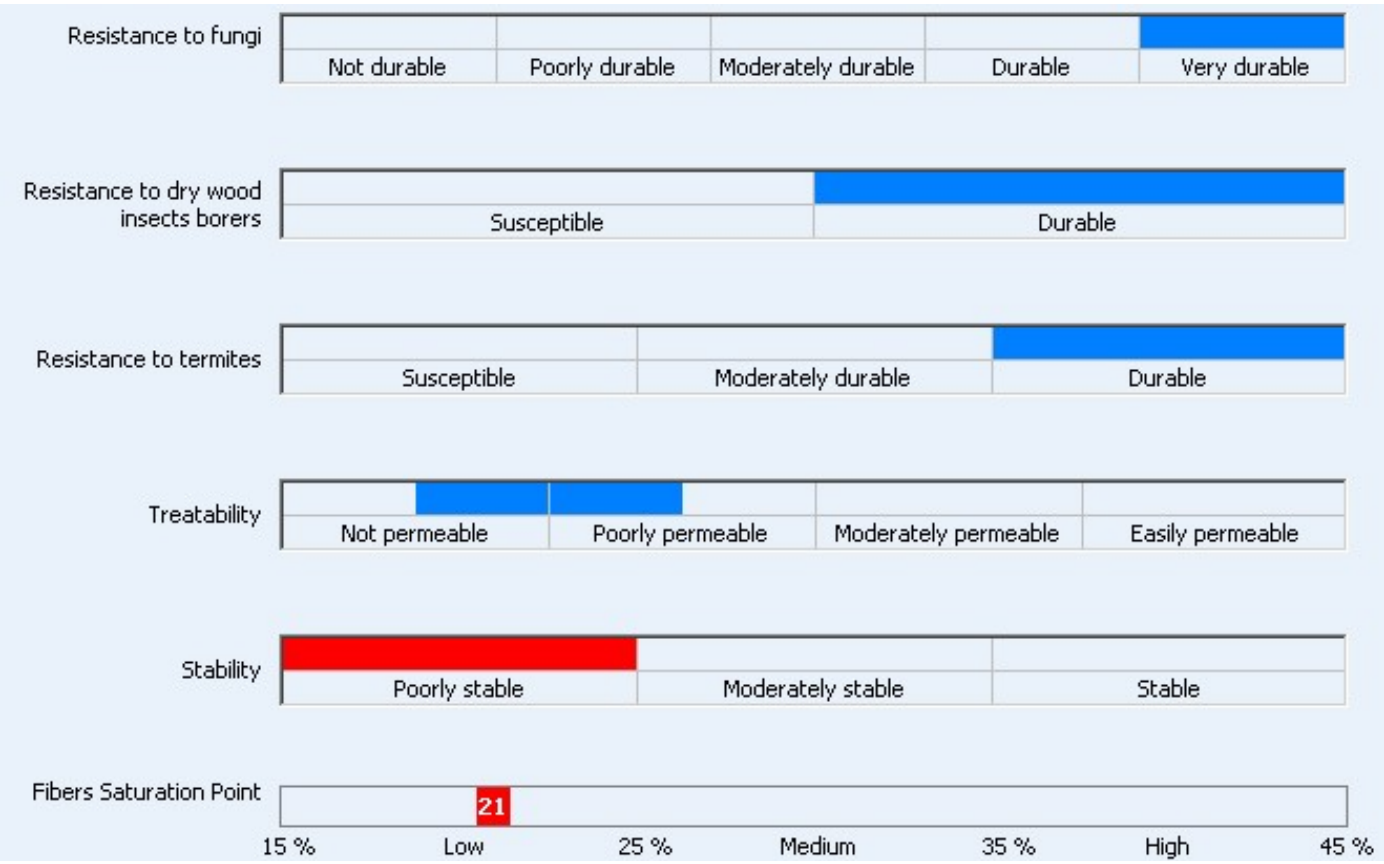
END-USES

Cabinetwork (high class furniture)
Flooring
Interior joinery
Wood-ware
Exterior panelling
Sculpture
Bridges (parts in contact with water or ground)
Sleepers
Vehicle or container flooring
Sliced veneer
Current furniture or furniture components
Exterior joinery
Stairs (inside)
Interior panelling
Heavy carpentry
Bridges (parts not in contact with water or ground)
Hydraulic works (fresh water)
Turned goods
Tool handles (resilient woods)

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Brazil (Amazon)	AMARELO CETIM	Brazil (Amazon)	AMARETAO
Brazil (Amazon)	MUIRATAUA	Brazil (Amazon)	PAU AMARELO
Brazil (Amazon)	PAU CETIM	Brazil (Amazon)	PEQUIA CETIM


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 60 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 14 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
21
15 %
Low
25 %
Medium
35 %
High
45 %