MAYAPIS

Family: DIPTEROCARPACEAE (angiosperm)

Scientific name(s): Shorea palosapis
Shorea squamata (synonymous)

Commercial restriction: no commercial restriction

Note: MAYAPIS comes from the Philippines; it can be commercialized as WHITE LAUAN when it is pale or as RED LAUAN when it is quite dark.

WOOD DESCRIPTION

Color: light red
Sapwood: not clearly demarcated
Texture: medium
Grain: interlocked
Interlocked grain: slight
Note: Brittleheart possible.
Wood pink to light or dark red. Ribbon like aspect on quartersawn, sometimes irregular grain. Presence of fluid resin.

LOG DESCRIPTION

Diameter: from 50 to 130 cm
Thickness of sapwood: from 2 to 6 cm
Floats: yes
Log durability: moderate (treatment recommended)

PHYSICAL 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 *:	0,52	0,04
Monnin hardness *:	1,7	0,4
Coeff. of volumetric shrinkage:	0,43 %	0,03 %
Total tangential shrinkage (TS):	7,0 %	0,5 %
Total radial shrinkage (RS):	2,9 %	0,5 %
TS/RS ratio:	2,4	
Fiber saturation point:	29 %	

Stability: stable

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	42 MPa	3 MPa
Static bending strength *:	73 MPa	6 MPa
Modulus of elasticity *:	10780 MPa	1012 MPa

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

Musical quality factor: 122,2 measured at 2651 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: 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 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: 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

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DRYING

Drying rate: normal to slow
Risk of distortion: high risk
Risk of casehardening: yes
Risk of checking: slight risk
Risk of collapse: no
Note: Drying requires care to avoid severe defects. Surface drying up to 30 % moisture content is recommended before kiln drying.

Possible drying schedule: 6

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
Green	42	41	94
50	48	43	74
30	54	46	63
20	60	51	62
15	60	51	62

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: nood
Note: Veneers are sometimes difficult to dry.

ASSEMBLING

Nailing / screwing: poor
Gluing: correct

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to MGR grading rules (2009)
Possible grading: Prime, Select, Standard, Serviceable, Utility

FIRE SAFETY

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

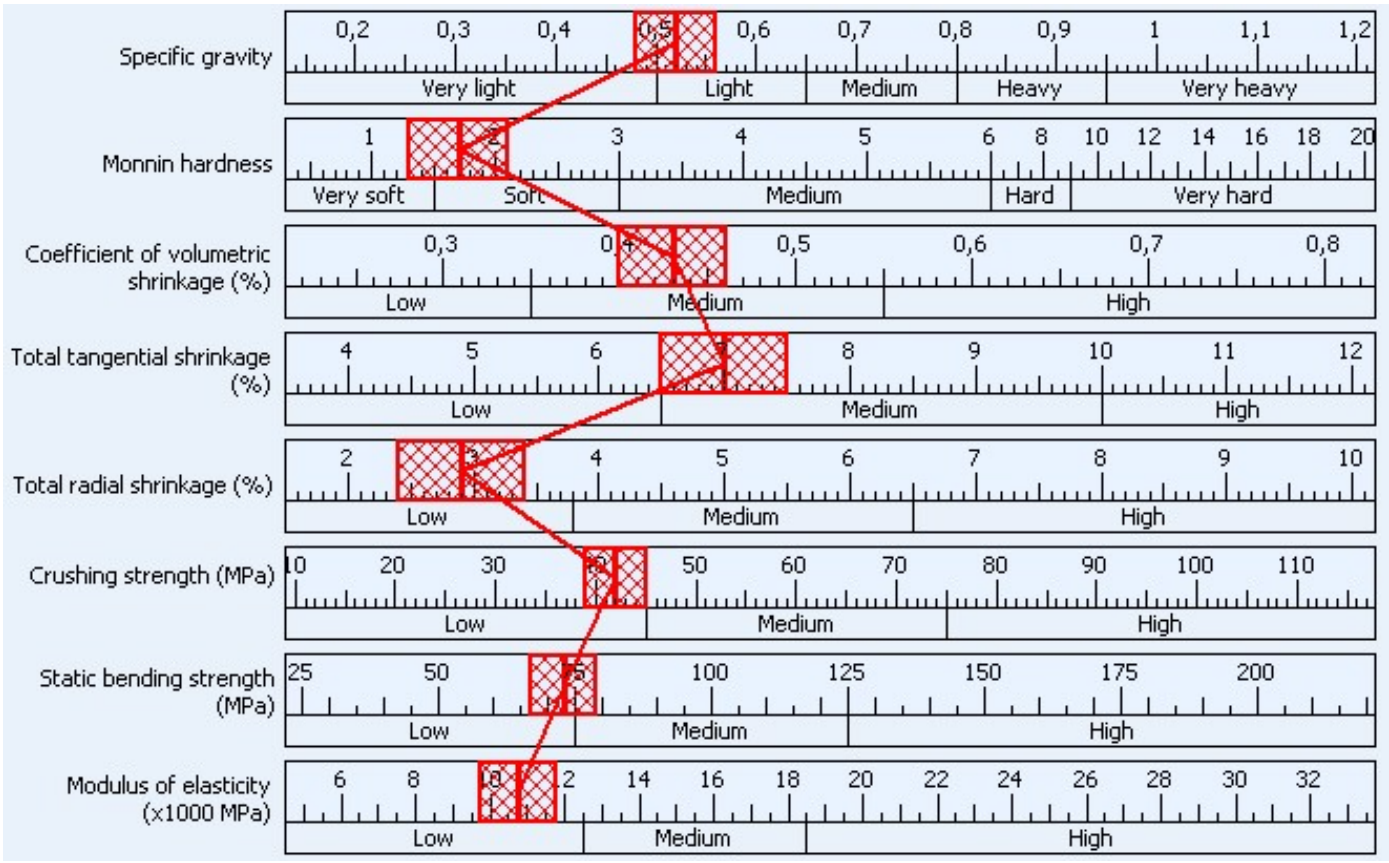
Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

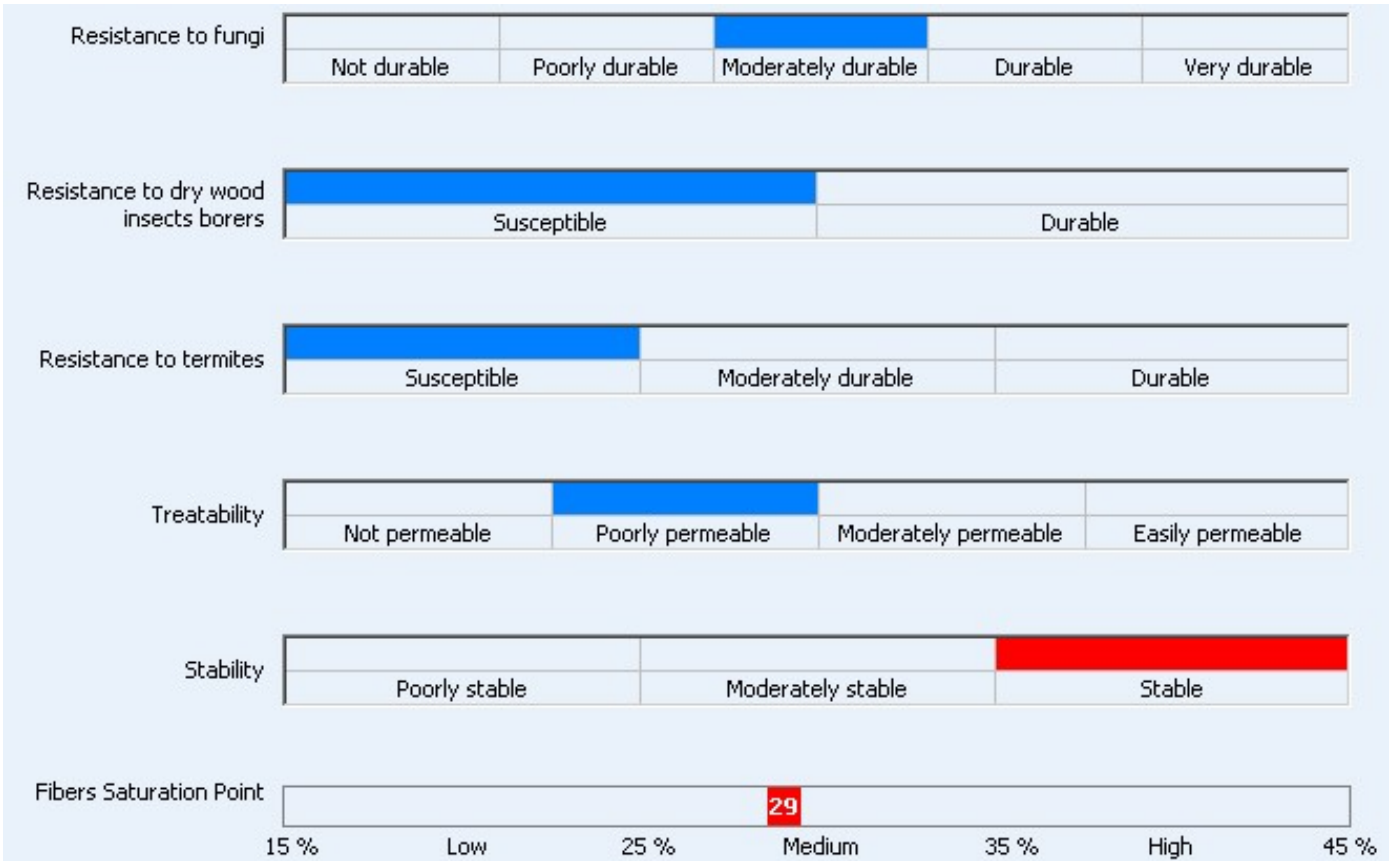
END-USES

Interior joinery
Current furniture or furniture components
Veneer for back or face of plywood
Ship building (planking and deck)
Moulding
Interior panelling
Veneer for interior of plywood
Sliced veneer
Cigar boxes
Light carpentry

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Philippines	MAYAPIS		


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
29
15 %
Low
25 %
Medium
35 %
High
45 %