LAUAN WHITE

Family: DIPTEROCARPACEAE (angiosperm)

Scientific name(s): Shorea contorta

Commercial restriction: no commercial restriction

Note: WHITE LAUAN species come from the Philippines.
The name "White Lauan" is sometimes given to the species Parashorea malaanonan, Shorea almon, Shorea palosapis.

WOOD DESCRIPTION

Color: pinkish white

Sapwood: not clearly demarcated

Texture: coarse

Grain: straight or interlocked

Interlocked grain: slight

Note: Brittleheart.
Wood cream white to pinkish white, becoming light brown with age. Sometimes, presence of white lines (resin canals). Visible darker silver figure on quartersawn. Frequent black holes.

LOG DESCRIPTION

Diameter: from 60 to 150 cm

Thickness of sapwood: from 5 to 9 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 *:	0,55	0,06
Monnin hardness *:	2,2	0,4
Coeff. of volumetric shrinkage:	0,49 %	0,04 %
Total tangential shrinkage (TS):	8,1 %	0,7 %
Total radial shrinkage (RS):	4,3 %	0,8 %
TS/RS ratio:	1,9	
Fiber saturation point:	30 %	

Stability: moderately stable

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	46 MPa	5 MPa
Static bending strength *:	80 MPa	7 MPa
Modulus of elasticity *:	12330 MPa	1488 MPa

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

Musical quality factor: 109,6 measured at 2735 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 2 - moderately permeable

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

Species covering the use class 5: No

Note: 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: use not recommended

DRYING

Drying rate: normal
Risk of distortion: slight risk
Risk of casehardening: no
Risk of checking: no risk or very slight risk
Risk of collapse: no
Note: Risks of blue stain.

Possible drying schedule: 2

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
Green	50	47	84
40	50	45	75
30	55	47	67
20	70	55	47
15	75	58	44

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: Risks of tearing in edging. Tendency to woolliness - keep sharp tools. Large stripes on quartersawn (interlocked grain).

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.

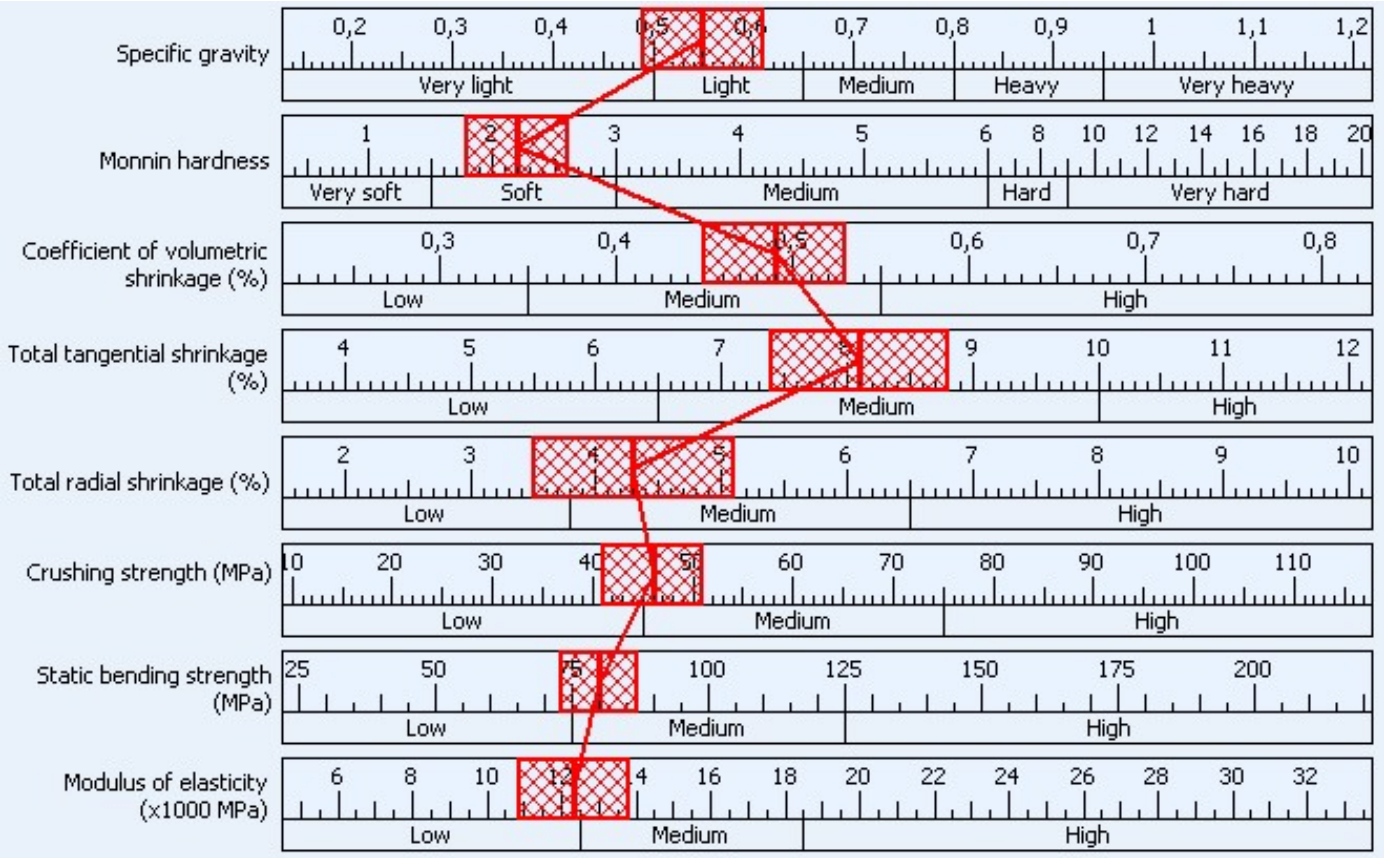
END-USES

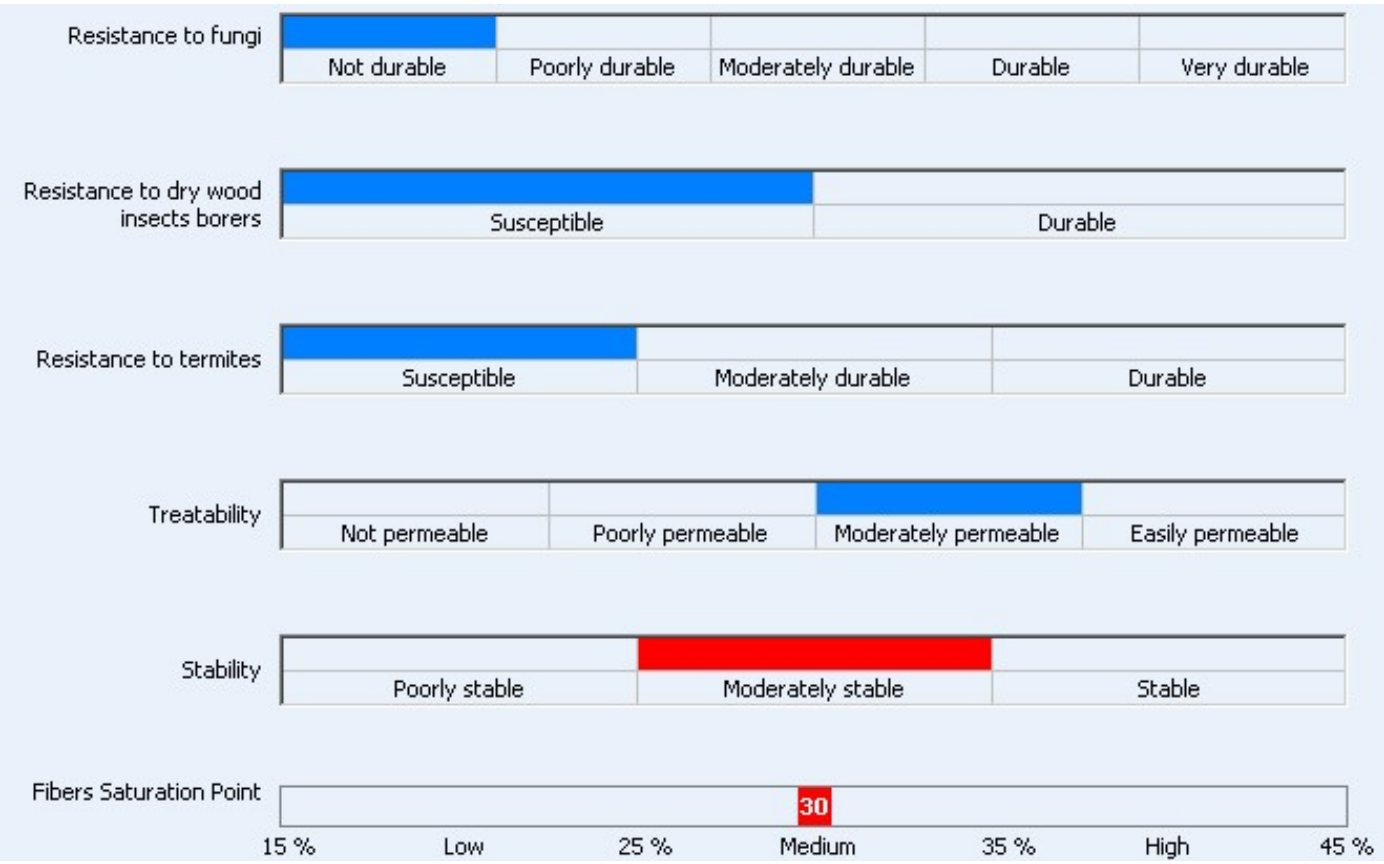
Veneer for interior of plywood
Fiber or particle boards
Interior joinery
Current furniture or furniture components
Glued laminated
Sliced veneer
Note: Filling is recommended
Veneer for back or face of plywood
Formwork
Interior panelling
Moulding
Boxes and crates

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Philippines	BAGTIKAN	Philippines	LAUAN MALAANONAN
Philippines	URAT MATA	Philippines	WHITE LAUAN

LAUAN WHITE


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
30
15 %
Low
25 %
Medium
35 %
High
45 %