

Family: DIPTEROCARPACEAE (angiosperm)

Scientific name(s): Shorea negrosensis* (voir note)

Shorea polysperma* (voir note)

Commercial restriction: no commercial restriction

Note: * species belonging to the sub-genus Rubroshorea.

RED LAUAN species come from the Philippines.

WOOD DESCRIPTION

Color: red brown
Sapwood: clearly demarcated
Texture: medium
Grain: interlocked
Interlocked grain: marked

Note: Frequent hollow tree (trees with a large diameter).

Wood red brown more or less dark. Slightly lustrous. Ribbon like aspect. Visible silver figure. Presence of white lines (resin canals).

LOG DESCRIPTION

Diameter: from 80 to 120 cm
Thickness of sapwood: from 5 to 6 cm
Floats: no
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 *:	0,65	0,05
Monnin hardness *:	2,7	0,5
Coeff. of volumetric shrinkage:	0,51 %	0,04 %
Total tangential shrinkage (TS):	7,6 %	0,9 %
Total radial shrinkage (RS):	4,3 %	0,7 %
TS/RS ratio:	1,8	
Fiber saturation point:	29 %	
Stability:	moderately stable	

Note: Hardness varies from soft to fairly hard.

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	50 MPa	5 MPa
Static bending strength *:	90 MPa	6 MPa
Modulus of elasticity *:	13290 MPa	962 MPa

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

Musical quality factor: 112,7 measured at 2255 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 M - moderately 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

Note: Black holes quite frequent.

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: yes

Risk of checking: slight risk

Risk of collapse: no

Note: Drying must be done with care to avoid risks of casehardening.

Possible drying schedule: 2

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
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: good

Note: Tendency to tear in planing. Keep sharp tools.

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 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

Sliced veneer

Formwork

Interior panelling

Exterior panelling

Moulding

Ship building (planking and deck)

Boxes and crates

Glued laminated

Rolling shutters

Veneer for back or face of plywood

Current furniture or furniture components

Interior joinery

Exterior joinery

Stairs (inside)

Cabinetwork (high class furniture)

Musical instruments

Light carpentry

Flooring

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>
Philippines	RED LAUAN
Philippines	TIAON

<u>Country</u>	<u>Local name</u>
Philippines	TANGILE

