PULAI

Family: APOCYNACEAE (angiosperm)
Scientific name(s): Alstonia spp.* (voir note)
Commercial restriction: no commercial restriction
Note: * Alstonia spp.: origins Asia-Oceania.

WOOD DESCRIPTION

Color: creamy white
Sapwood: not clearly demarcated
Texture: medium
Grain: straight
Interlocked grain: absent

LOG DESCRIPTION

Diameter: from 60 to 75 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

Note: Wood cream white to light yellow, aspect slightly lustrous. Grain sometimes irregular or oblique. Presence of latex 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 *:	0,45	
Monnin hardness *:	1,5	
Coeff. of volumetric shrinkage:	0,33 %	
Total tangential shrinkage (TS):	6,1 %	
Total radial shrinkage (RS):	3,4 %	
TS/RS ratio:	1,8	
Fiber saturation point:	35 %	
Stability:	stable	

	Mean	Std dev.
Crushing strength *:	40 MPa	
Static bending strength *:	63 MPa	
Modulus of elasticity *:	8930 MPa	

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

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

DRYING

Drying rate: rapid
Risk of distortion: slight risk
Risk of casehardening: no
Risk of checking: slight risk
Risk of collapse: no
Note: Risks of blue stain during drying.

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: not recommended or without interest
Note: Keep sharp tools to avoid fuzzy surfaces. Filling recommended in order to obtain a good finish.

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)

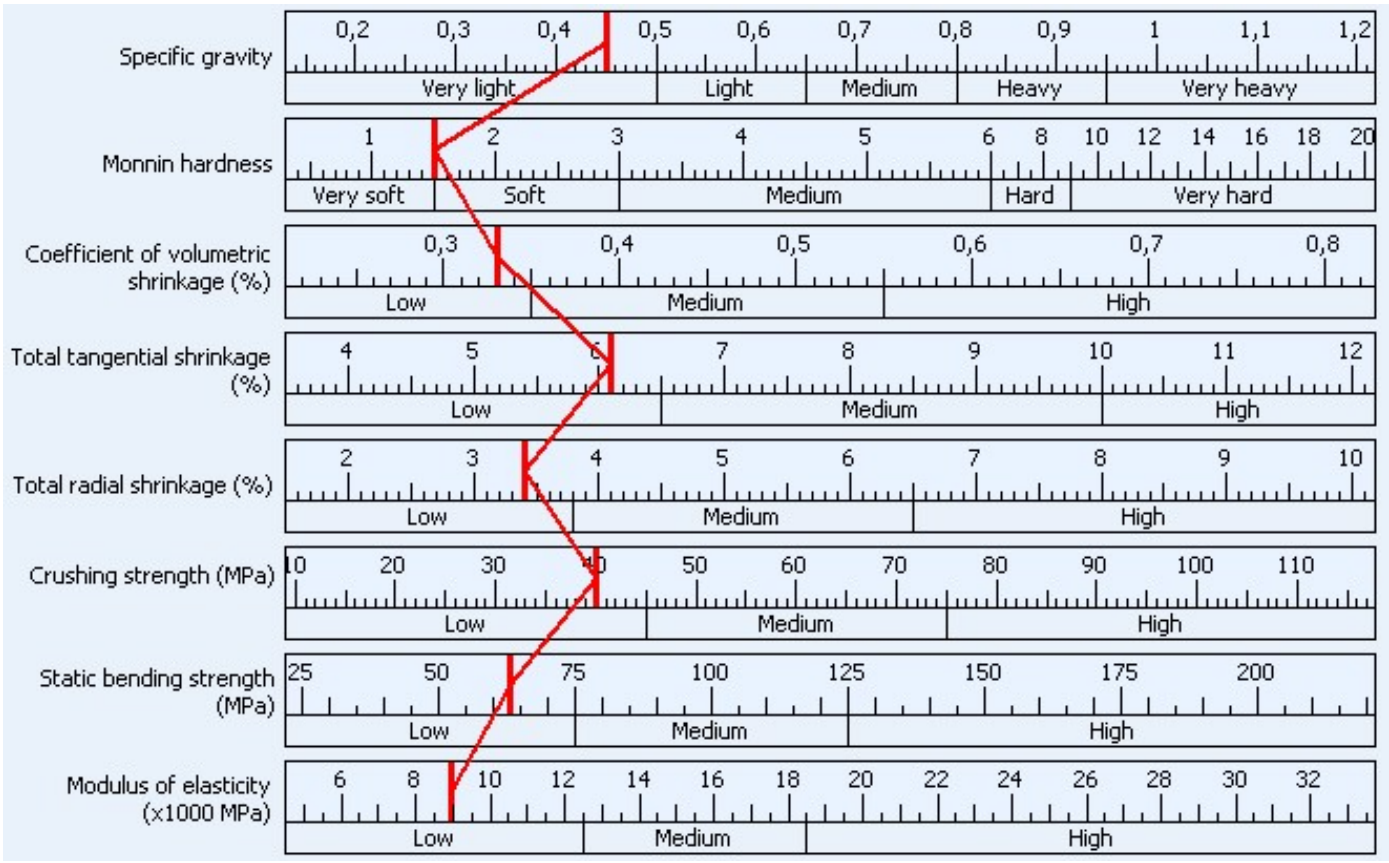
Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

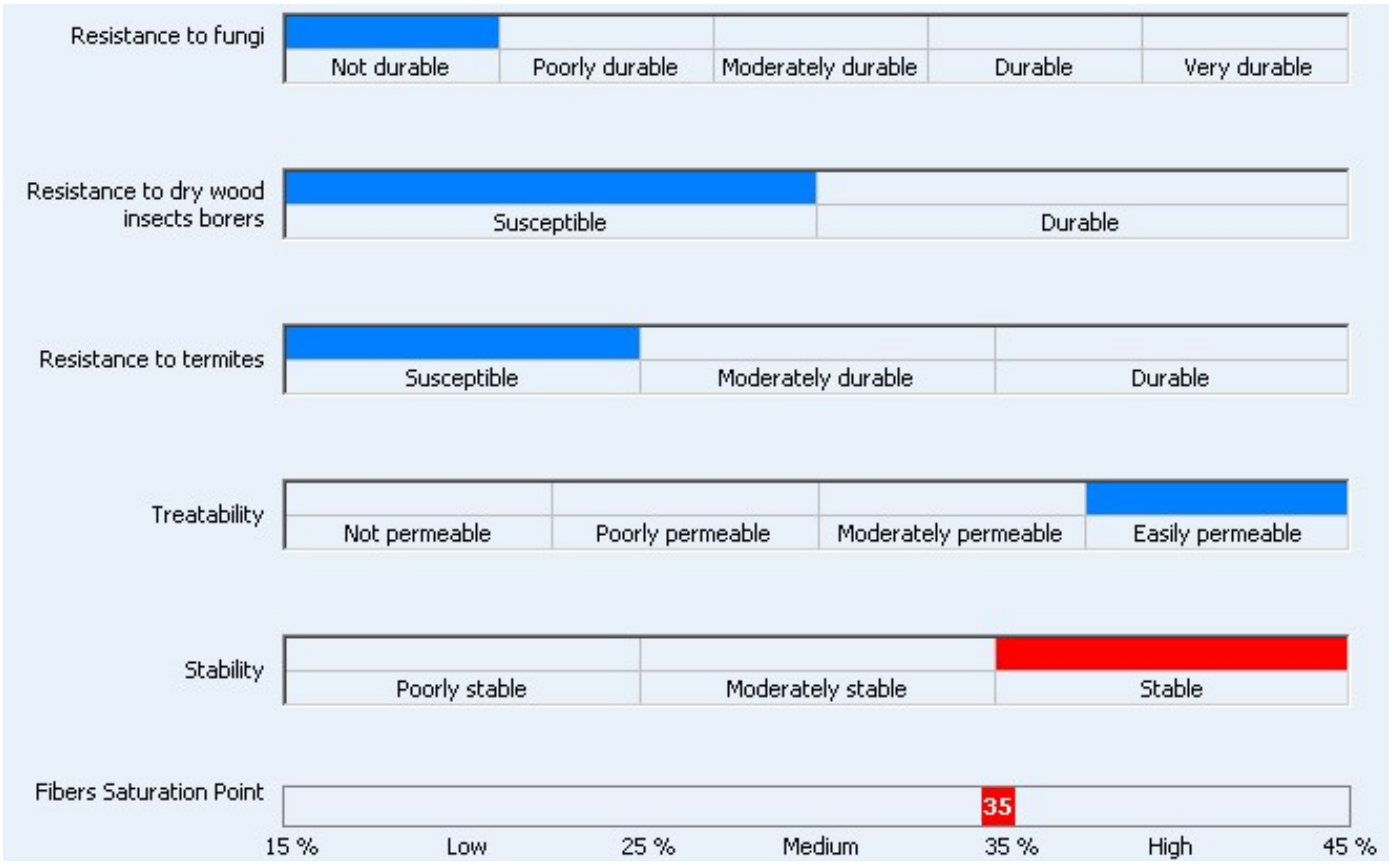
END-USES

Boxes and crates
Veneer for interior of plywood
Moulding
Current furniture or furniture components
Matches
Interior joinery
Interior panelling

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Australia	MILK WOOD	Australia	WHITE CHEESE WOOD
India	CHATIAN	India	CHATIYAN
India	SHAITANWOOD	Indonesia	PULAI
Indonesia	SEPATI	Laos	MAI TIN PET
Peninsular Malaysia	PULAI	Malaysia (islands)	PULAI
Myanmar	LETOK	Myanmar	SEGA
Myanmar	TAUN ME OK	Papua New Guinea	MILK WOOD
Papua New Guinea	WHITE CHEESE WOOD	Philippines	DITA
Philippines	LINOG	Sri Lanka	RUKATTANA
Thailand	THIA	Vietnam	MO-CUA
United Kingdom	PAGODA TREE	United Kingdom	PATTERN WOOD


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