

Family: DIPTEROCARPACEAE (angiosperm)

Scientific name(s): Shorea albida

Commercial restriction: no commercial restriction

Note: ALAN-BATU is the commercial name of heavy Shorea albida, ALAN-BUNGA is the commercial name of lighter Shorea albida.

## WOOD DESCRIPTION

Color: red brown  
Sapwood: clearly demarcated  
Texture: medium  
Grain: straight or interlocked  
Interlocked grain: slight

Note: Possible brittleheart. Sometimes presence of white streaks (resin canals).

## LOG DESCRIPTION

Diameter: from 50 to 100 cm  
Thickness of sapwood: from 4 to 6 cm  
Floats: no  
Log durability: no information available

## PHYSICAL PROPERTIES

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

	<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,80	
Monnin hardness *:	6,0	
Coeff. of volumetric shrinkage:	0,46 %	
Total tangential shrinkage (TS):	6,5 %	
Total radial shrinkage (RS):	3,1 %	
TS/RS ratio:	2,1	
Fiber saturation point:		

Stability: moderately stable to poorly stable

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	57 MPa	
Static bending strength *:	103 MPa	
Modulus of elasticity *:	16860 MPa	

(\*: at 12% moisture content, with 1 MPa = 1 N/mm<sup>2</sup>)

## 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 S - susceptible

Treatability (according to E.N. standards): class 4 - not 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: 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  
 Risk of distortion: high risk  
 Risk of casehardening: no  
 Risk of checking: slight risk  
 Risk of collapse: no

Note: Thin stock must be dried with care to prevent distortions.

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: fairly high  
 Sawteeth recommended: stellite-tipped  
 Cutting tools: tungsten carbide  
 Peeling: not recommended or without interest  
 Slicing: not recommended or without interest  
 Note: Resin may clog the tools and may have a blunting effect. Filling is recommended to obtain a good finish.

## ASSEMBLING

Nailing / screwing: good but pre-boring necessary  
 Gluing: correct  
 Note: Risk of splitting 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

Industrial or heavy flooring  
 Vehicle or container flooring  
 Exterior joinery  
 Interior panelling  
 Current furniture or furniture components

Flooring  
 Ship building (ribs)  
 Interior joinery  
 Exterior panelling

## MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Brunei	ALAN-BATU	Brunei	ALAN-BUNGA
Peninsular Malaysia	ALAN-BUNGA	Peninsular Malaysia	ALAN-MERAKA
Peninsular Malaysia	ALAN-PAYA	Peninsular Malaysia	SELANGAN MERAH
Malaysia (islands)	ALAN-BATU	Malaysia (islands)	MERAKA
Malaysia (islands)	RED SELANGAN		

