Common name:	ALAN-BATU
Family:	DIPTEROCARPACEAE
Scientific name(s):	Shorea albida
Note:	ALAN-BATU is the commercial name of heavy Shorea albida; ALAN-BUNGA is the commercial name of lighter Shorea albida.

LOG DESCRIPTION

Diameter:	from 50 to 100 cm
Thickness of sapwood:	from 4 to 6 cm
Floats:	no
Durability in forest :	No information available
Note:	Possible brittleheart. Sometimes presence of white streaks (resin canals).

WOOD DESCRIPTION

Colour:	Red brown
Sapwood:	Clearly demarcated
Texture:	Medium
Grain:	Straight or interlocked
Interlocked grain:	Slight

PHYSICAL PROPERTIES

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

	mean	standard deviation
Density *:	0.80 g/cm3	
Monnin hardness*:	6.0	
Coef of volumetric shrinkage:	0.46 %	
Total tangential shrinkage:	6.5 %	
Total radial shrinkage:	3.1 %	
Fibre saturation point:	%	
Stability:	Moderately stable to poorly stable	

MECHANICAL PROPERTIES

	mean	standard deviation
Crushing strength *:	57 MPa	
Static bending strength *:	103 MPa	
Modulus of elasticity *:	16860 MPa	

(* : at 12 % moisture content ; 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.

Fungi:	Class 3 moderately durable
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)
Termites:	Class S - Susceptible
Treatability:	4 - not permeable
Use class*:	2 - inside or under cover (dampness possible)

* ensured by natural durability (according EN standards).

MAIN LOCAL NAMES

Countries	Local names
Brunei	ALAN-BATU
Brunei	ALAN-BUNGA
Malaysia (islands)	ALAN-BUNGA
Malaysia (islands)	ALAN-MERAKA
Malaysia (islands)	ALAN-PAYA
Malaysia (islands)	SELANGAN MERAH
Peninsular Malaysia	ALAN-BATU
Peninsular Malaysia	MERAKA
Peninsular Malaysia	RED SELANGAN

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks:	Does not require any preservative treatment
In case of temporary humidification risk:	Requires appropriate preservative treatment
In case of permanent humidification risk:	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

Possible drying schedule

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 < 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.

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

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.

END-USES

Main known end-uses; they must to be implemented according to the code of practice.
Important remark: some end-uses are mentionned for information (traditional, regional or ancient end-uses).

Industrial or heavy flooring
Flooring
Vehicle or container flooring
Ship building (ribs)
Exterior joinery
Interior joinery
Interior panelling
Exterior panelling
Current furniture or furniture components