

Common name:	KAPUR
Family:	DIPTEROCARPACEAE
Scientific name(s):	Dryobalanops spp.

LOG DESCRIPTION		WOOD DESCRIPTION	
Diameter:	from 50 to 100 cm	Colour:	Red brown
Thickness of sapwood:	from 4 to 8 cm	Sapwood:	Clearly demarcated
Floats:	no	Texture:	Medium
Durability in forest :	Good	Grain:	Straight or interlocked
		Interlocked grain:	Slight
Note:	Brittleheart. The colour varies from red brown to pink brown. Camphor smell. Presence of thin resin veins.		

PHYSICAL PROPERTIES			MECHANICAL 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		mean	standard deviation
Density *:	0.74 g/cm ³	0.07			
Monnin hardness*:	4.1	1.4	Crushing strength *:	60 MPa	9
Coef of volumetric shrinkage:	0.62 %	0.04	Static bending strength *:	110 MPa	26
Total tangential shrinkage:	9.1 %	0.6	Modulus of elasticity *:	16150 MPa	3500
Total radial shrinkage:	4.5 %				
Fibre saturation point:	26 %				
Stability:	stable		(* : at 12 % moisture content ; 1 MPa = 1 N/mm ²)		

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 1-2 very durable to durable	* ensured by natural durability (according EN standards).
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)	
Termites:	Class M - Moderately durable	
Treatability:	4 - not permeable	
Use class*:	4 - in ground or fresh water contact	
Note:	This species is listed in the European standard NF EN 350-2. After felling, logs are very sensible to black holes. Under tropical climate, resistance to decay is moderate. According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.	

MAIN LOCAL NAMES

Countries	Local names
Indonesia	KAPUR
Indonesia	KAPUR EMPEDU
Indonesia	KAPUR KAYATAN
Indonesia	KAPUR SINGKEL
Indonesia	KAPUR SINTUK
Indonesia	KAPUR TANDUK
Indonesia	PETANANG
Malaysia (islands)	BORNEO CAMPHORWOOD
Malaysia (islands)	PAIGIE
Malaysia (islands)	SWAMP KAPUR
Peninsular Malaysia	KAPUR KEJATAN
Peninsular Malaysia	KELADAN

KAPUR

REQUIREMENT OF A PRESERVATIVE TREATMENT

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

DRYING

Possible drying schedule

Drying rate:	Slow	Temperature (°C)			Air humidity (%)
		M.C. (%)	dry-bulb	wet-bulb	
Risk of distortion:	Slight risk	Green	42	39	82
Risk of casehardening:	No	50	48	43	74
Risk of checking:	High risk	40	48	43	74
Risk of collapse:	No	30	48	43	74
		15	54	46	63

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: Possible resin exsudation during kiln drying.

SAWING AND MACHINING

Blunting effect:	Fairly high
Sawteeth recommended:	Stellite-tipped
Cutting tools:	Tungsten carbide
Peeling:	Good
Slicing:	Not recommended or without interest
Note:	Normal to high blunting effect.

ASSEMBLING

Nailing / Screwing:	Good but pre-boring necessary
Gluing:	Correct
Note:	Possible oxydation in contact with iron. Resin exsudation sometimes troublesome in gluing.

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).

Note: Staining of runoff waters.

Flooring

Heavy carpentry

Wood frame house

Exterior joinery

Exterior panelling

Current furniture or furniture components

Formwork

Bridges (parts not in contact with water or ground)

Stairs (inside)

Vehicle or container flooring

Shingles

Veneer for interior of plywood

Veneer for back or face of plywood

Boxes and crates

Interior joinery

Tool handles (resilient woods)

Turned goods
