Common name:	NYATOH
Family:	SAPOTACEAE
Scientific name(s):	Palaquium spp.
Note:	NYATOH is the name given to the light and medium SAPOTACEAE woods (Payena, Ganua and especially Palaquium); the name BITIS is given to heavy woods .

LOG DESCRIPTION

Diameter:	from 50 to 100 cm
Thickness of sapwood:	from 4 to 9 cm
Floats:	no
Durability in forest :	Moderate (treatment recommended)
Note:	Wood dark pink to red brown. Grain sometimes wavy.

WOOD DESCRIPTION

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

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
Density *:	0.57 g/cm3	0.06
Monnin hardness*:	2.6	0.6
Coef of volumetric shrinkage:	0.48 %	0.03
Total tangential shrinkage:	7.7 %	0.8
Total radial shrinkage:	4.1 %	0.5
Fibre saturation point:	29 %	

	mean	standard deviation
Crushing strength *:	53 MPa	7
Static bending strength *:	83 MPa	13
Modulus of elasticity *:	12770 MPa	2150

Stability: stable

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

Note: Wood properties vary according to the different species.

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:	3 - poorly permeable
Biological hazard class*:	2 - not in ground contact, under cover (dampness possible)
Note:	Several species are regrouped under the name NYATOH of the genus Palaquium and the natural durability is variable from one species to another. It is thus recommended to restrict the use without preservative treatment for end-uses under biological hazard class 2.

* ensured by natural durability (according EN standards).

COUNTRIES - LOCAL NAMES

Countries	Local names
India	PALI
Indonesia	NYATOH
Malaysia (islands)	RIAM
Peninsular Malaysia	MAYANG
Peninsular Malaysia	NYATOH
Peninsular Malaysia	TABAN
Papua New Guinea	PENCIL CEDAR
Philippines	NATO
Thailand	KHA-NUNNOK
Vietnam	CHAY
Italia	NYATOH
Netherlands	BALAM
United Kingdom	NYATOH
United Kingdom	PADANG

NYATOH

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 to slow
Risk of distortion:	High risk
Risk of casehardening:	No
Risk of checking:	High 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 shedule 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.

SAWING AND MACHINING

Blunting effect:	High
Sawteeth recommended:	Stellite-tipped
Cutting tools:	Tungsten carbide
Peeling:	Good
Slicing:	Good
Note:	Very variable silica content according to species. Sawdust may cause irritations.

ASSEMBLING

Nailing / Screwing:	Good but pre-boring necessary
Gluing:	Correct

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).

Current furniture or furniture components
Cabinetwork (high class furniture)
Interior joinery
Exterior joinery
Interior panelling
Sliced veneer
Veneer for back or face of plywood
Light carpentry
Flooring
Turned goods
Moulding