Common name:	PADOUK
Family:	FABACEAE
Scientific name(s):	Pterocarpus soyauxii Pterocarpus osun

LOG DESCRIPTION

Diameter:	from 60 to 100 cm
Thickness of sapwood:	from 6 to 10 cm
Floats:	no
Durability in forest :	Moderate (treatment recommended)
Note:	Variable buoyancy.

WOOD DESCRIPTION

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

Wood bright red becoming purplish brown with light.

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 *:	0.79 g/cm3	0.09
Monnin hardness*:	8.3	1.9
Coef of volumetric shrinkage:	0.44 %	0.10
Total tangential shrinkage:	5.0 %	0.5
Total radial shrinkage:	3.2 %	0.3
Fibre saturation point:	21 %	
Stability:	stable	

MECHANICAL PROPERTIES

	mean	standard deviation
Crushing strength *:	65 MPa	8
Static bending strength *:	116 MPa	24
Modulus of elasticity *:	15870 MPa	1885

(* : 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 1 - very durable
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)
Termites:	Class D - Durable
Treatability:	2 - moderately permeable
Biological hazard class*:	4 - in ground or fresh water contact or hight dampness
Note:	This species is listed in the European standard NF EN 350-2. It naturally covers the biological hazard class 5 (end-uses in marine environment or in brackish water) only for end-uses under temperate and cold environment.

* ensured by natural durability (according EN standards).

COUNTRIES - LOCAL NAMES

Countries	Local names
Angola	TACULA
Cameroon	MBEL
Central African Rep	PADOUK
Congo	KISESE
Dem Rep of Congo	MONGOLA
Dem Rep of Congo	MUKULA
Dem Rep of Congo	N'GULA
Equatorial Guinea	PALO ROJO
Gabon	MBEL
Nigeria	OSUN
Belgium	CORAIL
Germany	PADAUK
Italia	PADUK
Netherlands	PADOEK
United Kingdom	AFRICANPADAUK
United Kingdom	BARWOOD
United Kingdom	CAMWOOD
United Kingdom	PADAUK

PADOUK

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

Drying rate:	Normal to slow
Risk of distortion:	No risk or very slight risk
Risk of casehardening:	No
Risk of checking:	No risk or very 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 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:	Fairly high
Sawteeth recommended:	Stellite-tipped
Cutting tools:	Tungsten carbide
Peeling:	Not recommended or without interest
Slicing:	Good
Note:	Sometimes, irritant sawdust. Requires power. Sometimes, difficulties due to interlocked grain.

ASSEMBLING

Nailing / Screwing:	Good but pre-boring necessary
Gluing:	Correct
Note:	Pre-boring necessary: risks of splits especially with thin boards. Gluing requires care (dense wood).

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).

Hydraulic works (seawater)
Industrial or heavy flooring
Flooring
Sliced veneer
Cabinetwork (high class furniture)
Sleepers
Bridges (parts in contact with water or ground)
Bridges (parts not in contact with water or ground)
Vehicle or container flooring
Heavy carpentry
Ship building (ribs)
Ship building (planking and deck)
Turned goods
Seats
Exterior joinery
Stairs (inside)
Interior joinery
Sculpture