

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): Oxystigma oxyphyllum

Pterygopodium oxyphyllum (synonymous)

Oxystigma mannii

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: red brown
Sapwood: clearly demarcated
Texture: coarse
Grain: straight or interlocked
Interlocked grain: slight
Note: Some logs are not floatable.
Heartwood copper red brown with blackish veins. Blackish resin exudation.

LOG DESCRIPTION

Diameter: from 70 to 120 cm
Thickness of sapwood: from 6 to 10 cm
Floats: yes
Log durability: moderate (treatment recommended)

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 *:	0,64	0,03
Monnin hardness *:	2,9	0,4
Coeff. of volumetric shrinkage:	0,45 %	0,04 %
Total tangential shrinkage (TS):	7,5 %	0,6 %
Total radial shrinkage (RS):	3,9 %	0,5 %
TS/RS ratio:	1,9	
Fiber saturation point:	28 %	
Stability: stable		

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	58 MPa	6 MPa
Static bending strength *:	88 MPa	13 MPa
Modulus of elasticity *:	14960 MPa	950 MPa

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

Musical quality factor: 122,6 measured at 2613 Hz

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 M - moderately durable

Treatability (according to E.N. standards): class 3-4 - poorly or not permeable

Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)

Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.

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: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: no

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: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

Note: Resin tends to clog tools. Irritant sawdust.

ASSEMBLING

Nailing / screwing: good

Gluing: correct

Note: Gluing requires care due to resin exudation.

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to SATA grading rules (1996)

For the "General Purpose Market":

Possible grading for square edged timbers: choix I, choix II, choix III, choix IV

Possible grading for short length lumbers: choix I, choix II

Possible grading for short length rafters: choix I, choix II, choix III

For the "Special Market":

Possible grading for strips and small boards (ou battens): choix I, choix II, choix III

Possible grading for rafters: choix I, choix II, choix III

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

Veneer for interior of plywood

Blockboard

Interior joinery

Current furniture or furniture components

Boxes and crates

Glued laminated

Shingles

Formwork

Veneer for back or face of plywood

Exterior joinery

Exterior panelling

Sliced veneer

Light carpentry

Wood frame house

Fiber or particle boards

Note: Due to the presence of resin, it is often used painted. Wood from less resinous logs can be used as a substitute for WALNUT (*Juglans* spp.).

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Angola	TOLA CHINFUTA	Cameroon	NOM SINEDON
Congo	KITOLA	Congo	TCHITOLA
Gabon	EMOLA	Gabon	M' BABOU
Nigeria	LOLAGBOLA	Democratic Republic of the Congo	AKWAKWA
Democratic Republic of the Congo	TSHIBUDIMBU		

