

Family: MALVACEAE (angiosperm)

Scientific name(s): Sterculia rhinopetala

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: red brown
 Sapwood: clearly demarcated
 Texture: coarse
 Grain: straight or interlocked
 Interlocked grain: slight

LOG DESCRIPTION

Diameter: from 60 to 80 cm
 Thickness of sapwood: from 4 to 6 cm
 Floats: no
 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.

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>		<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,84	0,07	Crushing strength *:	72 MPa	6 MPa
Monnin hardness *:	5,6	1,8	Static bending strength *:	133 MPa	13 MPa
Coeff. of volumetric shrinkage:	0,68 %	0,14 %	Modulus of elasticity *:	18670 MPa	250 MPa
Total tangential shrinkage (TS):	10,0 %	0,4 %			
Total radial shrinkage (RS):	5,0 %	0,3 %			
TS/RS ratio:	2,0				
Fiber saturation point:	26 %				
Stability:	moderately stable				

(*: at 12% moisture content, with 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.

E.N. = Euro Norm

Funghi (according to E.N. standards): class 2 - 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 - poorly permeable

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

Species covering the use class 5: No

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: does not require any preservative treatment

In case of risk of temporary humidification: does not require any preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: slow	Possible drying schedule: 4			
Risk of distortion: high risk		Temperature (°C)		
Risk of casehardening: no	M.C. (%)	dry-bulb	wet-bulb	Air humidity (%)
Risk of checking: high risk	Green	42	39	82
Risk of collapse: no	50	48	43	74
Note: Drying must be handled with care in order to reduce defects. Quartersawn recommended.	40	48	43	74
	30	48	43	74
	15	54	46	63

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: Very irritant sawdust. Some difficulties in planing due to interlocked grain.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
 Gluing: correct (for interior only)
 Note: Tends to split when nailing. Sometimes, difficulties with vinylic glue.

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

Sliced veneer	Interior joinery
Current furniture or furniture components	Veneer for interior of plywood
Veneer for back or face of plywood	Flooring
Heavy carpentry	Wood frame house
Stairs (inside)	Interior panelling
Seats	

Note: Filling is recommended to obtain a good finish.

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Cameroon	N' KANANG	Ivory Coast	LOTOFA
Ghana	WAWABIMA	Nigeria	AYE
United Kingdom	BROWN STERCULIA		

