

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): Guibourtia ehie

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: yellow brown
 Sapwood: clearly demarcated
 Texture: fine
 Grain: interlocked
 Interlocked grain: slight

Note: Wood yellow brown to dark brown, with grey to blackish veins and copper glints. Moiré aspect on quartersawn. White deposits.

LOG DESCRIPTION

Diameter: from 60 to 75 cm
 Thickness of sapwood: from 4 to 7 cm
 Floats: no
 Log durability: good

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 *:	0,82	0,05
Monnin hardness *:	7,5	2,3
Coeff. of volumetric shrinkage:	0,57 %	0,12 %
Total tangential shrinkage (TS):	8,0 %	1,2 %
Total radial shrinkage (RS):	3,9 %	0,7 %
TS/RS ratio:	2,1	
Fiber saturation point:	24 %	
Stability:	moderately stable	

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	69 MPa	9 MPa
Static bending strength *:	127 MPa	16 MPa
Modulus of elasticity *:	21470 MPa	2781 MPa
(*: at 12% moisture content, with 1 MPa = 1 N/mm ²)		
Musical quality factor:	109,8 measured at 2875 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

Fungi (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 D - durable

Treatability (according to E.N. standards): class 3 - poorly permeable

Use class ensured by natural durability: class 4 - in ground or fresh water contact

Species covering the use class 5: No

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

According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

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: normal to slow

Possible drying schedule: 6

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: no

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	42	41	94
50	48	43	74
30	54	46	63
20	60	51	62
15	60	51	62

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: fairly high

Sawteeth recommended: stellite-tipped

Cutting tools: tungsten carbide

Peeling: not recommended or without interest

Slicing: nood

Note: Requires power. Some difficulties due to interlocked grain. Sometimes white efflorescence on sawnwoods; a wash with warm water can remove it.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary

Gluing: correct

Note: Pre-boring recommended due to hardness.

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

Cabinetwork (high class furniture)

Sliced veneer

Interior panelling

Musical instruments

Exterior joinery

Stairs (inside)

Current furniture or furniture components

Interior joinery

Turned goods

Flooring

Exterior panelling

Resistant to one or several acids

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Cameroon	MBAGNA	Ivory Coast	AMAZAKOUE
Ghana	ANOKYE	Ghana	HYEDUA
Ghana	HYEDUANINI	Gabon	OVANGKOL
Equatorial Guinea	PALISSANDRO	Nigeria	GUIBOURTIA
Nigeria	KALUK AFUON	United States of America	MOZAMBIQUE

