

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): *Brachystegia cynometroides*

*Brachystegia leonensis*

*Brachystegia eurycoma*

Commercial restriction: no commercial restriction

## WOOD DESCRIPTION

Color: light brown  
Sapwood: clearly demarcated  
Texture: medium  
Grain: interlocked  
Interlocked grain: slight  
Note: Heartwood light brown to red brown with purplish glints. Grain sometimes irregular.

## LOG DESCRIPTION

Diameter: from 70 to 120 cm  
Thickness of sapwood: from 6 to 15 cm  
Floats: no  
Log durability: low (must be treated)

## 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 *:	0,62	0,08
Monnin hardness *:	3,2	0,8
Coeff. of volumetric shrinkage:	0,44 %	0,05 %
Total tangential shrinkage (TS):	6,8 %	0,4 %
Total radial shrinkage (RS):	4,6 %	0,4 %
TS/RS ratio:	1,5	
Fiber saturation point:	30 %	
Stability: stable		

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	55 MPa	8 MPa
Static bending strength *:	93 MPa	13 MPa
Modulus of elasticity *:	12880 MPa	1488 MPa

(\*: at 12% moisture content, with 1 MPa = 1 N/mm<sup>2</sup>)

Musical quality factor: 114,6 measured at 2810 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 - 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: requires appropriate preservative treatment

In case of risk of permanent humidification: 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: yes

Note: Drying must be handled slowly and carefully to avoid defects.

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: fairly high

Sawteeth recommended: stellite-tipped

Cutting tools: tungsten carbide

Peeling: good

Slicing: good

Note: Difficult to obtain a good finish due to irregular grain.

## ASSEMBLING

Nailing / screwing: good but pre-boring necessary

Gluing: correct

Note: Tends to split when nailing.

## 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

Interior joinery

Interior panelling

Veneer for back or face of plywood

Flooring

Wood frame house

Wood-ware

Note: A careful sanding and a filling are necessary to obtain a good finish.

Sliced veneer

Current furniture or furniture components

Stairs (inside)

Light carpentry

Glued laminated

Cabinetwork (high class furniture)

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**MAIN LOCAL NAMES**

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<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Cameroon	EKOP-NAGA	Ivory Coast	MEBLO
Gabon	MENDOU	Liberia	TEBAKO
Nigeria	OKWEN	Sierra Leone	BOGDEI
United Kingdom	OKWEN		

