

Family: MELIACEAE (angiosperm)

Scientific name(s): Khaya senegalensis

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: red brown
Sapwood: clearly demarcated
Texture: medium
Grain: interlocked
Interlocked grain: slight

Note: Wood pink brown turns to red brown with purple tint. Sapwood is not always clearly defined. Lustrous aspect.

LOG DESCRIPTION

Diameter: from 50 to 90 cm
Thickness of sapwood: from 3 to 8 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.

	<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,78	0,06
Monnin hardness *:	5,9	0,8
Coeff. of volumetric shrinkage:	0,43 %	0,06 %
Total tangential shrinkage (TS):	5,6 %	0,8 %
Total radial shrinkage (RS):	4,9 %	0,6 %
TS/RS ratio:	1,1	
Fiber saturation point:	27 %	

Stability: stable

Note: Hardness varies from fairly hard to hard.

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	54 MPa	8 MPa
Static bending strength *:	86 MPa	14 MPa
Modulus of elasticity *:	11650 MPa	1302 MPa

(*: 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 3 - moderately durable

Dry wood borers: durable - sapwood demarcated (risk limited to sapwood)

Termites (according to E.N. standards): class S - susceptible

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
Risk of distortion: slight risk
Risk of casehardening: no
Risk of checking: slight risk
Risk of collapse: no

Note: Risks of checking and distortion in presence of highly interlocked grain and tension wood.

Possible drying schedule: 6

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: normal
Sawteeth recommended: ordinary or alloy steel
Cutting tools: ordinary

Peeling: not recommended or without interest
Slicing: nood

Note: Tendency to woolliness. Sharp tools are necessary. A reduced cutting angle is required during machining in presence of interlocked grain .

ASSEMBLING

Nailing / screwing: good
Gluing: correct
Note: Pre-boring is sometimes recommended.

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)
Current furniture or furniture components
Interior panelling
Flooring
Heavy carpentry
Resistant to one or several acids

Sliced veneer
Interior joinery
Ship building (planking and deck)
Stairs (inside)
Turned goods

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Benin	ABGO	Benin	ACAJOU CAILCEDRAT
Benin	ZUNZATIN	Ivory Coast	ACAJOU CAILCEDRAT
Guinea	DIALA	Guinea-Bissau	BISSILOM
Senegal	BISSILOM		

