

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): Daniellia klainei

Daniellia ogea

Daniellia oliveri

Daniellia soyauxii

Daniellia thurifera

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: brown
Sapwood: not clearly demarcated
Texture: coarse
Grain: straight or interlocked
Interlocked grain: slight

Note: Possible presence of brittleheart. Sometimes greenish brown veins in heartwood.

LOG DESCRIPTION

Diameter: from 70 to 120 cm
Thickness of sapwood: from 4 to 12 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 *:	0,55	0,07
Monnin hardness *:	2,3	0,9
Coeff. of volumetric shrinkage:	0,43 %	0,11 %
Total tangential shrinkage (TS):	6,8 %	1,0 %
Total radial shrinkage (RS):	3,5 %	0,7 %
TS/RS ratio:	1,9	
Fiber saturation point:	30 %	
Stability: moderately stable		

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	38 MPa	7 MPa
Static bending strength *:	66 MPa	12 MPa
Modulus of elasticity *:	9550 MPa	1787 MPa

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

Musical quality factor: 97,2 measured at 2766 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 4-5 - poorly to not durable

Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)

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

Treatability (according to E.N. standards): class 2-3 - poorly to moderately permeable

Use class ensured by natural durability: class 1 - inside (no dampness)

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: requires appropriate preservative treatment

In case of risk of temporary humidification: use not recommended

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: rapid

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: no risk or very slight risk

Risk of collapse: yes

Note: Risks of distortion especially on backsawn. Risks of collapse with thick boards.

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: Surface often fuzzy. Assembling and gluing sometimes difficult due to warping of dried veneers.

ASSEMBLING

Nailing / screwing: good

Gluing: correct

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

Boxes and crates

Interior joinery

Blockboard

Sliced veneer

Current furniture or furniture components

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Benin	JATIN	Cameroon	NSOU
Congo	SINGA N'DOLA	Ivory Coast	FARO
Gabon	LONLAVIOL	Ghana	OGEA
Ghana	SHEDUA	Equatorial Guinea	N'SU
Nigeria	OZIYA	Democratic Republic of the Congo	BOLENGU
Sierra Leone	GBESSI	Germany	DANIELLIA
United Kingdom	OGEA		

