

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): *Distemonanthus benthamianus*

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

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

Note: Lemon-yellow to yellow brown. Some logs present a highly figured wood. Possible presence of internal stresses and wind shakes.

LOG DESCRIPTION

Diameter: from 60 to 90 cm
Thickness of sapwood: from 2 to 4 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 *:	0,73	0,06
Monnin hardness *:	5,6	1,7
Coeff. of volumetric shrinkage:	0,54 %	0,10 %
Total tangential shrinkage (TS):	5,8 %	1,0 %
Total radial shrinkage (RS):	3,6 %	0,6 %
TS/RS ratio:	1,6	
Fiber saturation point:	23 %	

Stability: moderately stable to stable

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	64 MPa	11 MPa
Static bending strength *:	116 MPa	13 MPa
Modulus of elasticity *:	14740 MPa	3053 MPa

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

Musical quality factor: 144,2 measured at 2704 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 4 - not permeable

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

Species covering the use class 5: No

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

The MOVINGUI cannot be used without appropriate preservative treatment for end-uses under use class 3, except for some parts of a work such as windows, less exposed than others (entrance doors, shutters ...). This species is used for exterior joinery in tropical area but its use in temperate area is limited as it is prone to *Coriolus versicolor* fungi attacks.

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

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: high
 Sawteeth recommended: stellite-tipped
 Cutting tools: tungsten carbide
 Peeling: good
 Slicing: good

Note: Some difficulties due to irregular grain. Filing is recommended in order to obtain a better finish.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary

Gluing: correct

Note: Pre-boring recommended, especially for large nails (risks of splits).

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	Veneer for back or face of plywood
Wood frame house	Exterior joinery
Interior joinery	Interior panelling
Exterior panelling	Flooring
Stairs (inside)	Cooperage
Arched goods	Cabinetwork (high class furniture)
Current furniture or furniture components	Glued laminated
Vehicle or container flooring	Turned goods
Shingles	Resistant to one or several acids
Light carpentry	

Note: MOVINGUI contains water-soluble yellow extracts that can stain the elements in contact with wood under moisture conditions.

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Benin	AYAN	Cameroon	EYEN
Ivory Coast	BARRE	Gabon	EYEN
Gabon	MOVINGUI	Ghana	AYAN
Ghana	BONSAMDUA	Equatorial Guinea	EYEN
Nigeria	AYAN	Nigeria	AYANRAN
United Kingdom	AYAN	United Kingdom	DISTEMONANTHUS

