NIEUK

Family: FABACEAE-MIMOSOIDEAE (angiosperm)
Scientific name(s): Fillaeopsis discophora
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: pinkish brown
Sapwood: not clearly demarcated
Texture: coarse
Grain: interlocked
Interlocked grain: marked
Note: Wood is pinkish brown to greyish brown with orange brown veins. Presence of transition wood between the yellowish white sapwood and the coloured heartwood.
Log is often sinuous.

LOG DESCRIPTION

Diameter: from 80 to 130 cm
Thickness of sapwood: from 5 to 10 cm
Floats: yes
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.

	Mean	Std dev.
Specific gravity *:	0,58	0,04
Monnin hardness *:	2,6	0,6
Coeff. of volumetric shrinkage:	0,42 %	0,05 %
Total tangential shrinkage (TS):	6,4 %	0,6 %
Total radial shrinkage (RS):	3,3 %	0,5 %
TS/RS ratio:	1,9	
Fiber saturation point:	25 %	
Stability:	poorly stable	

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	45 MPa	5 MPa
Static bending strength *:	79 MPa	16 MPa
Modulus of elasticity *:	11700 MPa	1600 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 4 - poorly 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 - moderately permeable
Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)
Species covering the use class 5: No
Note: Natural durability to fungi is very variable.

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: requires appropriate preservative treatment
In case of risk of temporary humidification: requires appropriate preservative treatment
In case of risk of permanent humidification: use not recommended

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DRYING

Drying rate: normal
Risk of distortion: high risk
Risk of casehardening: no
Risk of checking: no information available
Risk of collapse: no

Possible drying schedule: 2

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
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: stellite-tipped
Cutting tools: tungsten carbide
Peeling: good
Slicing: not recommended or without interest
Note: NIEUK emits an unpleasant odour when green.

ASSEMBLING

Nailing / screwing: good
Gluing: correct
Note: Does not split too much.

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.

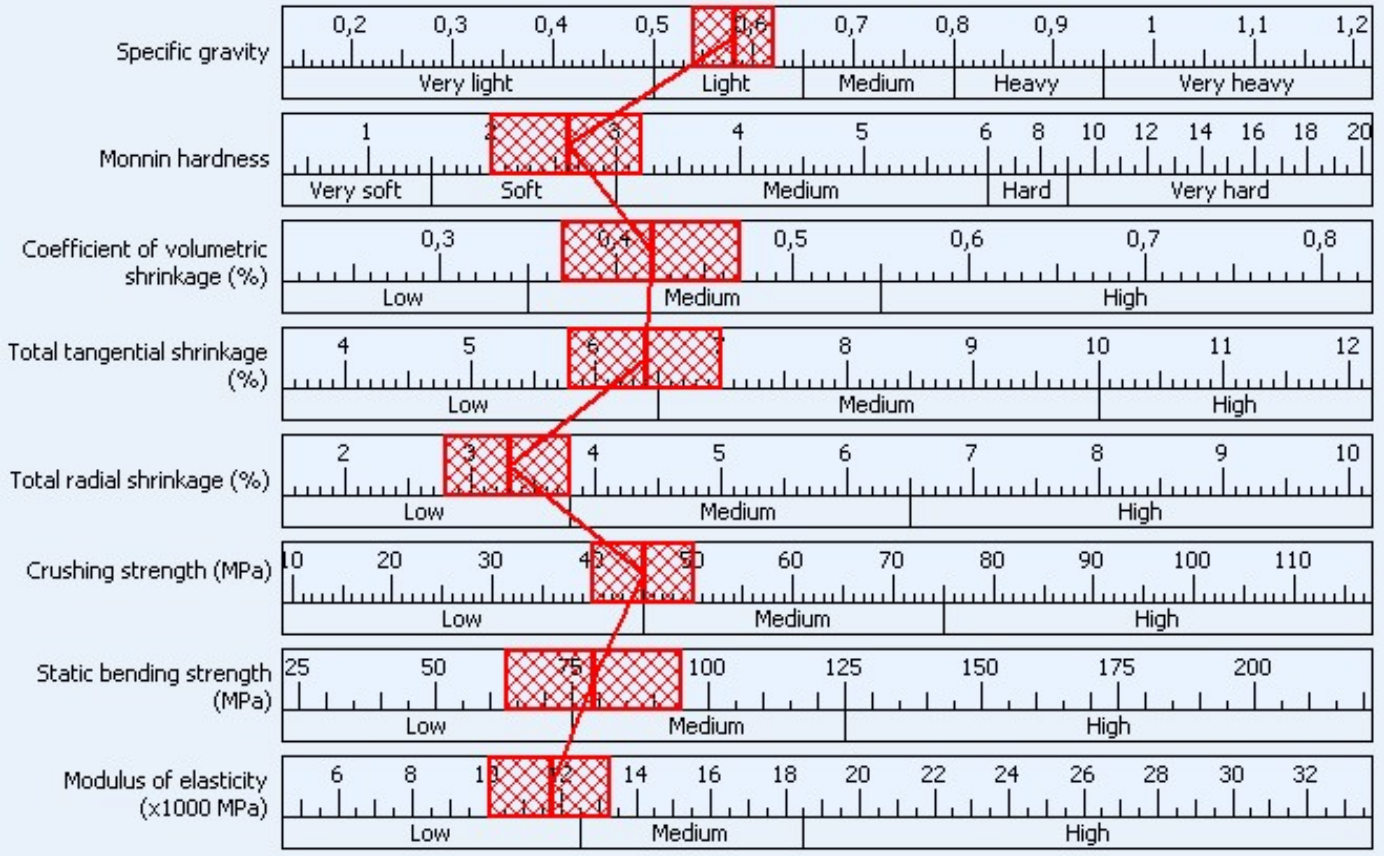
END-USES

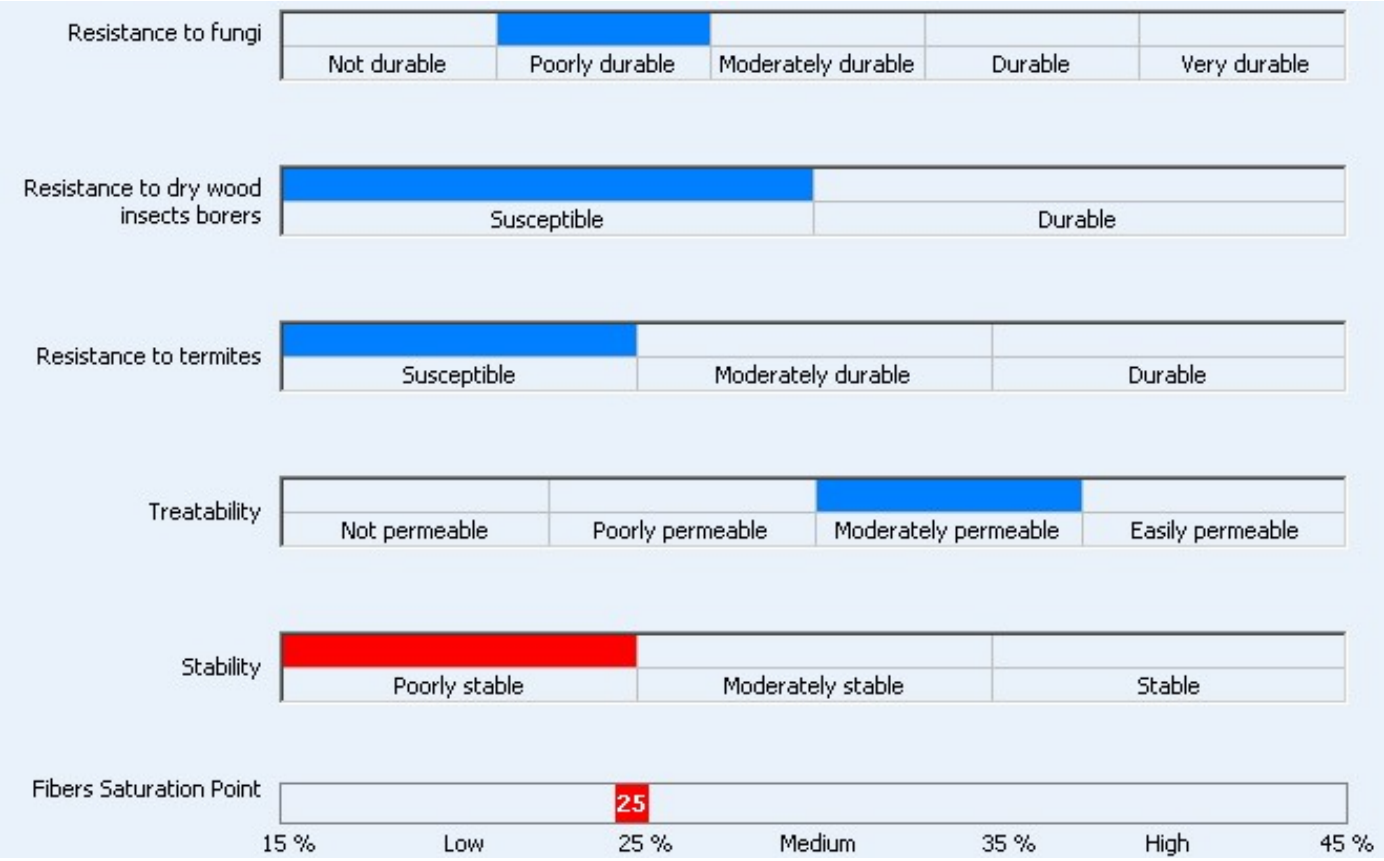
Veneer for interior of plywood
Formwork
Boxes and crates

Note: Its processing shows numerous difficulties linked particularly to the interlocked grain or to a weak stability. These blemishes strongly limit use possibilities for this species. It must be processed with a great respect to the code of practice.

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Cameroon	EYEK	Congo	MOULALA
Congo	MOUALI	Gabon	ENOUMNOUME
Gabon	EYEGH	Gabon	TFOUMA
Equatorial Guinea	ANGOCON		


Specific gravity
0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 1,1 1,2
Very light Light Medium Heavy Very heavy
Monnin hardness
1 2 3 4 5 6 8 10 12 14 16 18 20
Very soft Soft Medium Hard Very hard
Coefficient of volumetric shrinkage (%)
0,3 0,4 0,5 0,6 0,7 0,8
Low Medium High
Total tangential shrinkage (%)
4 5 6 7 8 9 10 11 12
Low Medium High
Total radial shrinkage (%)
2 3 4 5 6 7 8 9 10
Low Medium High
Crushing strength (MPa)
10 20 30 40 50 60 70 80 90 100 110
Low Medium High
Static bending strength (MPa)
25 50 75 100 125 150 175 200
Low Medium High
Modulus of elasticity (x1000 MPa)
6 8 10 12 14 16 18 20 22 24 26 28 30 32
Low Medium High


Resistance to fungi
Not durable Poorly durable Moderately durable Durable Very durable
Resistance to dry wood insects borers
Susceptible Durable
Resistance to termites
Susceptible Moderately durable Durable
Treatability
Not permeable Poorly permeable Moderately permeable Easily permeable
Stability
Poorly stable Moderately stable Stable
Fibers Saturation Point
25
15 % Low 25 % Medium 35 % High 45 %