EMIEN

Family: APOCYNACEAE (angiosperm)

Scientific name(s): Alstonia boonei
Alstonia congensis
Alstonia gilletii (synonymous)

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: creamy white
Sapwood: not demarcated
Texture: medium
Grain: straight
Interlocked grain: absent

LOG DESCRIPTION

Diameter: from 70 to 100 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

Note: Frequent brittleheart. Grain sometimes wavy. Frequent latex canals. Unpleasant odour when green.

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 *:	0,36	0,01
Monnin hardness *:	0,7	0,1
Coeff. of volumetric shrinkage:	0,37 %	0,05 %
Total tangential shrinkage (TS):	5,2 %	0,8 %
Total radial shrinkage (RS):	3,8 %	0,6 %
TS/RS ratio:	1,4	
Fiber saturation point:	32 %	

Stability: moderately stable to stable

Note: Properties similar to those of OBECHE (Triplochiton scleroxylon).

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	27 MPa	3 MPa
Static bending strength *:	43 MPa	6 MPa
Modulus of elasticity *:	8090 MPa	525 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 5 - 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 1 - easily permeable
Use class ensured by natural durability: class 1 - inside (no dampness)
Species covering the use class 5: No
Note: Very prone to blue stain.

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

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: no

Possible drying schedule: 3

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
Green	60	56	81
30	68	58	61
20	74	60	51
15	80	61	41

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: not recommended or without interest
Note: The presence of latex may cause the clogging of sawblades.

ASSEMBLING

Nailing / screwing: poor
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: -
Out of grading (low density).

END-USES

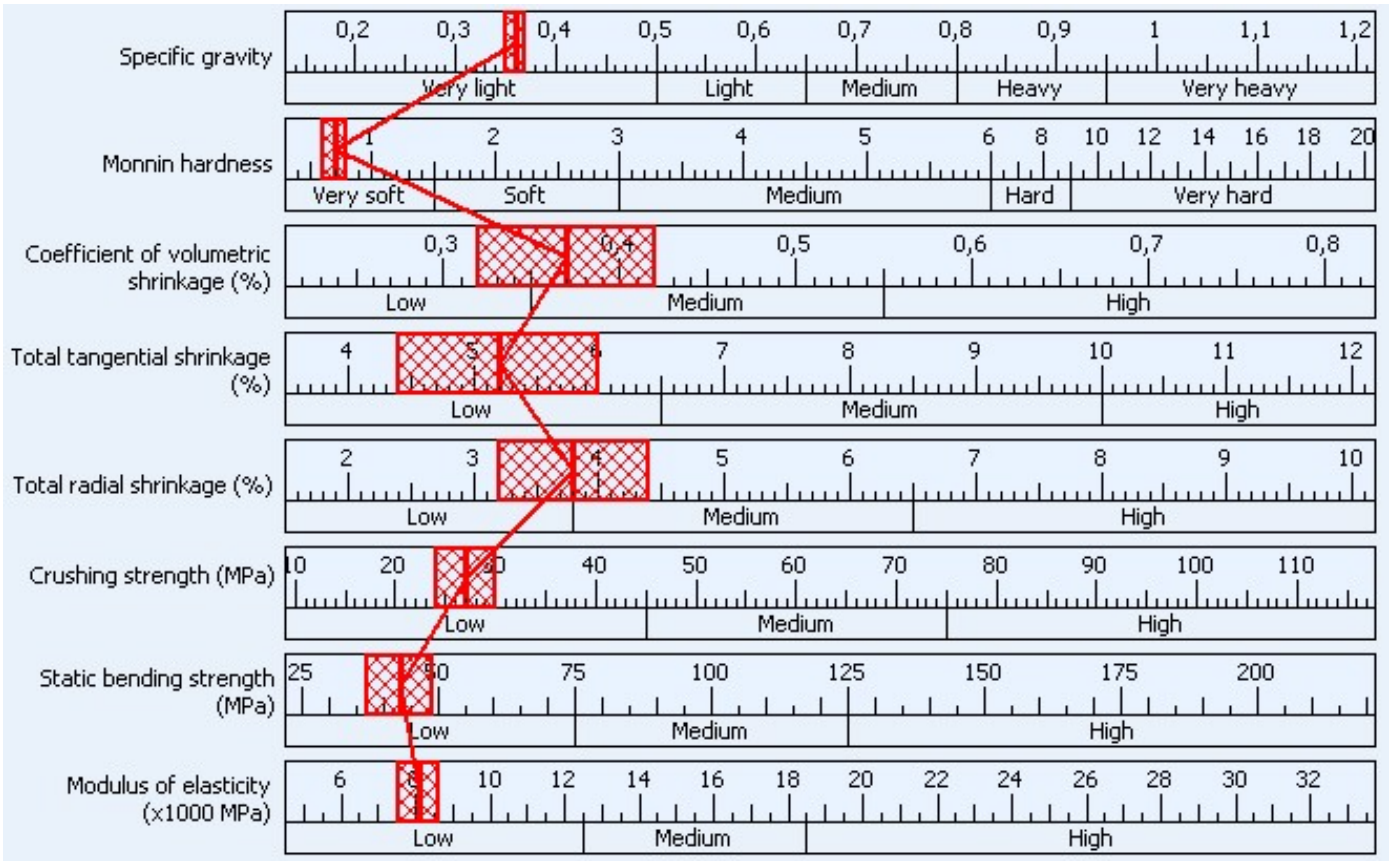
Veneer for interior of plywood
Boxes and crates
Open boats
Current furniture or furniture components
Pencils
Blockboard
Matches
Moulding
Interior joinery

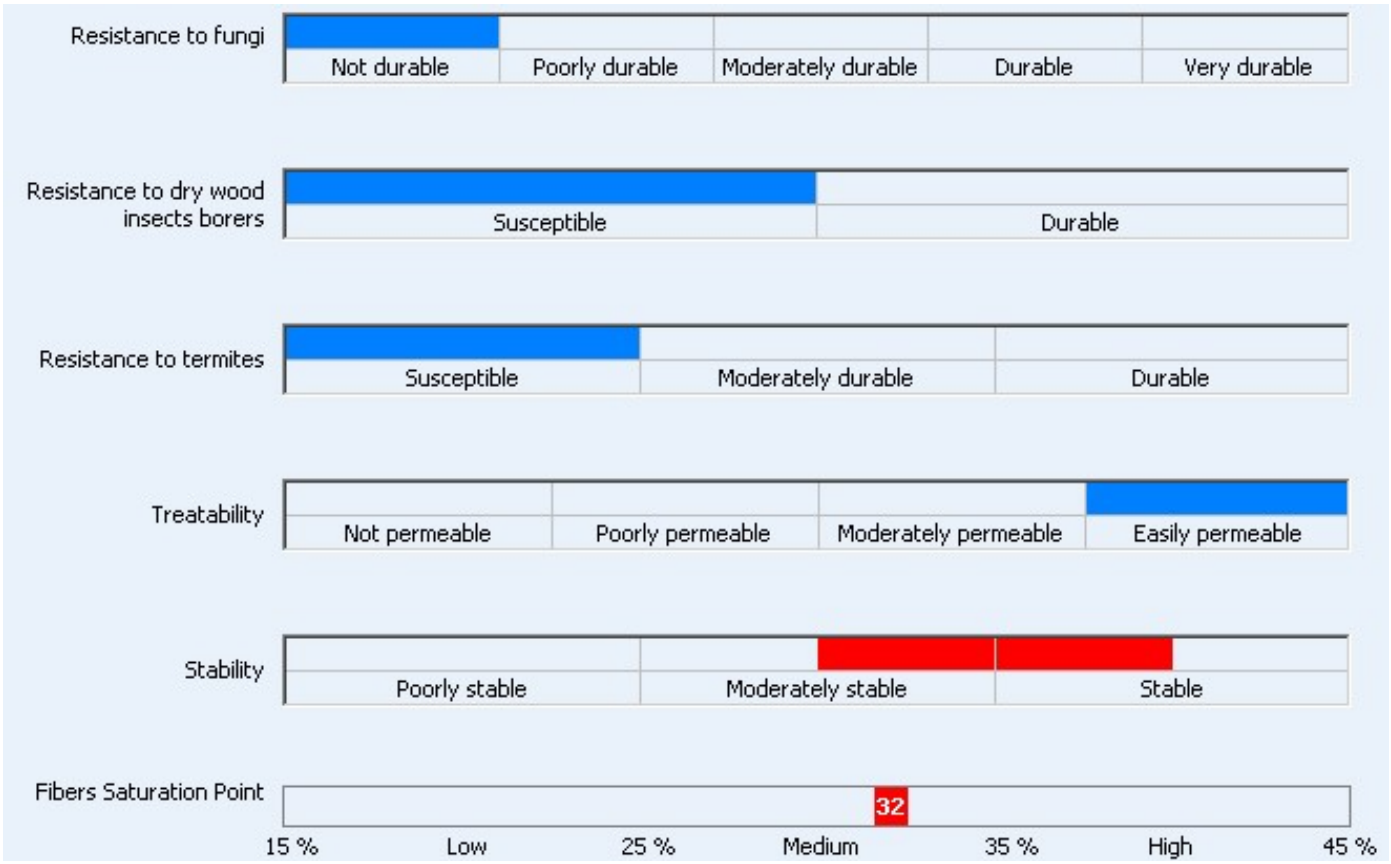
Note: Can be used as substitute for OBECHE (Triplochiton scleroxylon) but yield is often low due to latex canals.

MAIN LOCAL NAMES

Country	Local name
Benin	AFATIN
Cameroon	EKUK
Congo	TSONGOTI
Gabon	EKOUK
Ghana	SINDRU
Equatorial Guinea	EKOUK
Nigeria	AHUN
Uganda	MUJWA
Democratic Republic of the Congo	AKUKA
United Kingdom	ALSTONIA
United Kingdom	STOOLWOOD

Country	Local name
Cameroon	EKOUK
Ivory Coast	ABALE
Ivory Coast	EMIEN
Gabon	EKUK
Ghana	SINDURO
Equatorial Guinea	EKUK
Nigeria	AWUN
Central African Republic	MOGOUGA
Sierra Leone	KAIWI
United Kingdom	PATTERN WOOD


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
32
15 %
Low
25 %
Medium
35 %
High
45 %