ABURA

Family: RUBIACEAE (angiosperm)

Scientific name(s): Fleroya ledermannii
Hallea ciliata (synonymous)
Mitragyna ciliata (synonymous)
Fleroya stipulosa
Hallea stipulosa (synonymous)
Mitragyna stipulosa (synonymous)

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light brown
Sapwood: not demarcated
Texture: fine
Grain: straight or interlocked
Interlocked grain: slight
Note: Possible presence of brittleheart and coloured veins.

LOG DESCRIPTION

Diameter: from 60 to 80 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

PHYSICAL PROPERTIES

MECHANICAL AND ACOUSTIC 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 *:	0,60	0,05
Monnin hardness *:	2,0	0,3
Coeff. of volumetric shrinkage:	0,44 %	0,11 %
Total tangential shrinkage (TS):	8,9 %	0,3 %
Total radial shrinkage (RS):	4,3 %	0,1 %
TS/RS ratio:	2,1	
Fiber saturation point:	32 %	

Stability: moderately stable

	Mean	Std dev.
Crushing strength *:	46 MPa	9 MPa
Static bending strength *:	78 MPa	16 MPa
Modulus of elasticity *:	11020 MPa	2318 MPa

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

Musical quality factor: 96,2 measured at 2651 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 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 2 - 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: requires appropriate preservative treatment
In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: rapid to normal
Risk of distortion: no risk or very slight risk
Risk of casehardening: no
Risk of checking: slight risk
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: fairly high
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: good
Slicing: nood
Note: Blunting effect is variable.
Sawdust occasionally irritant.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
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)

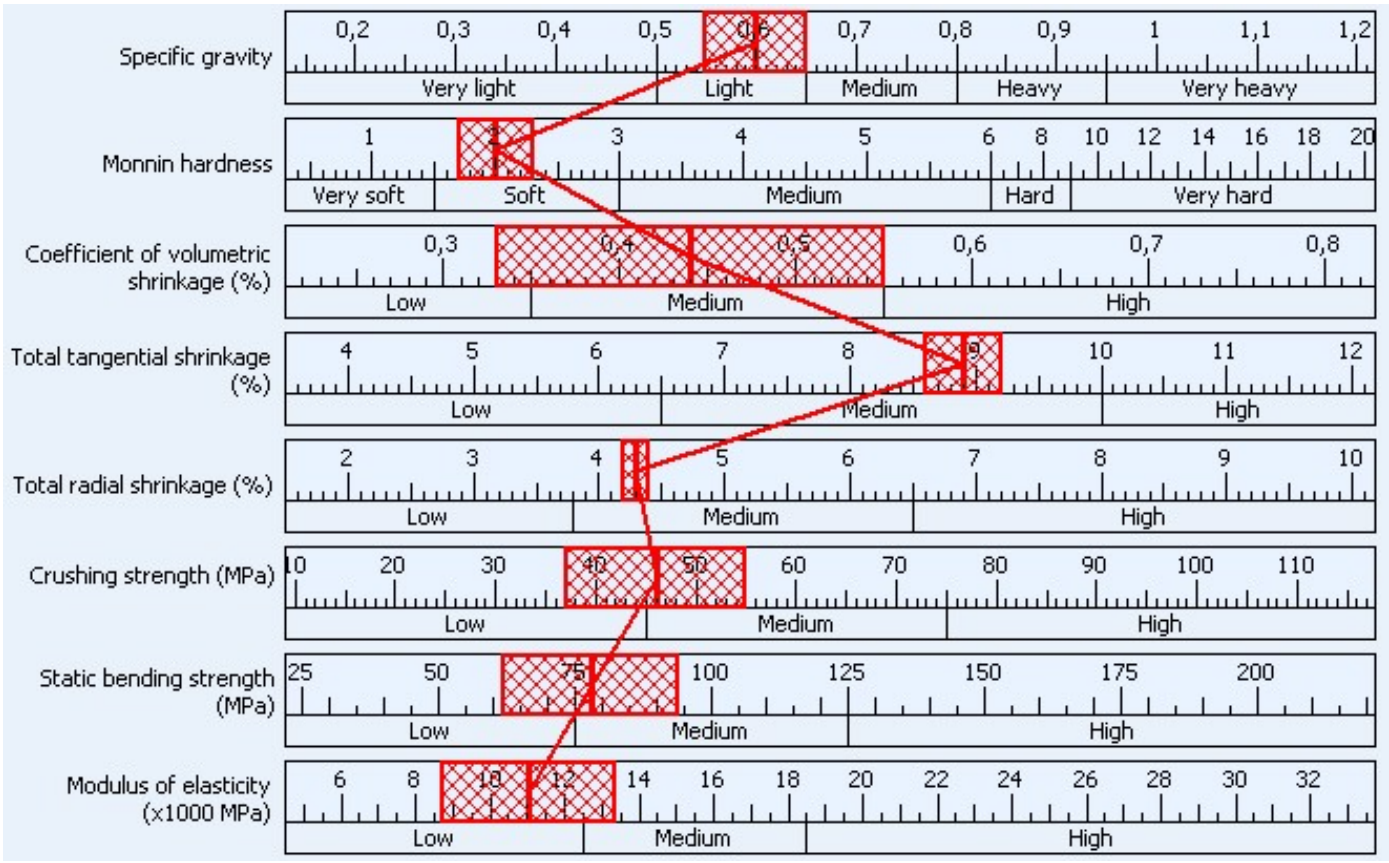
Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

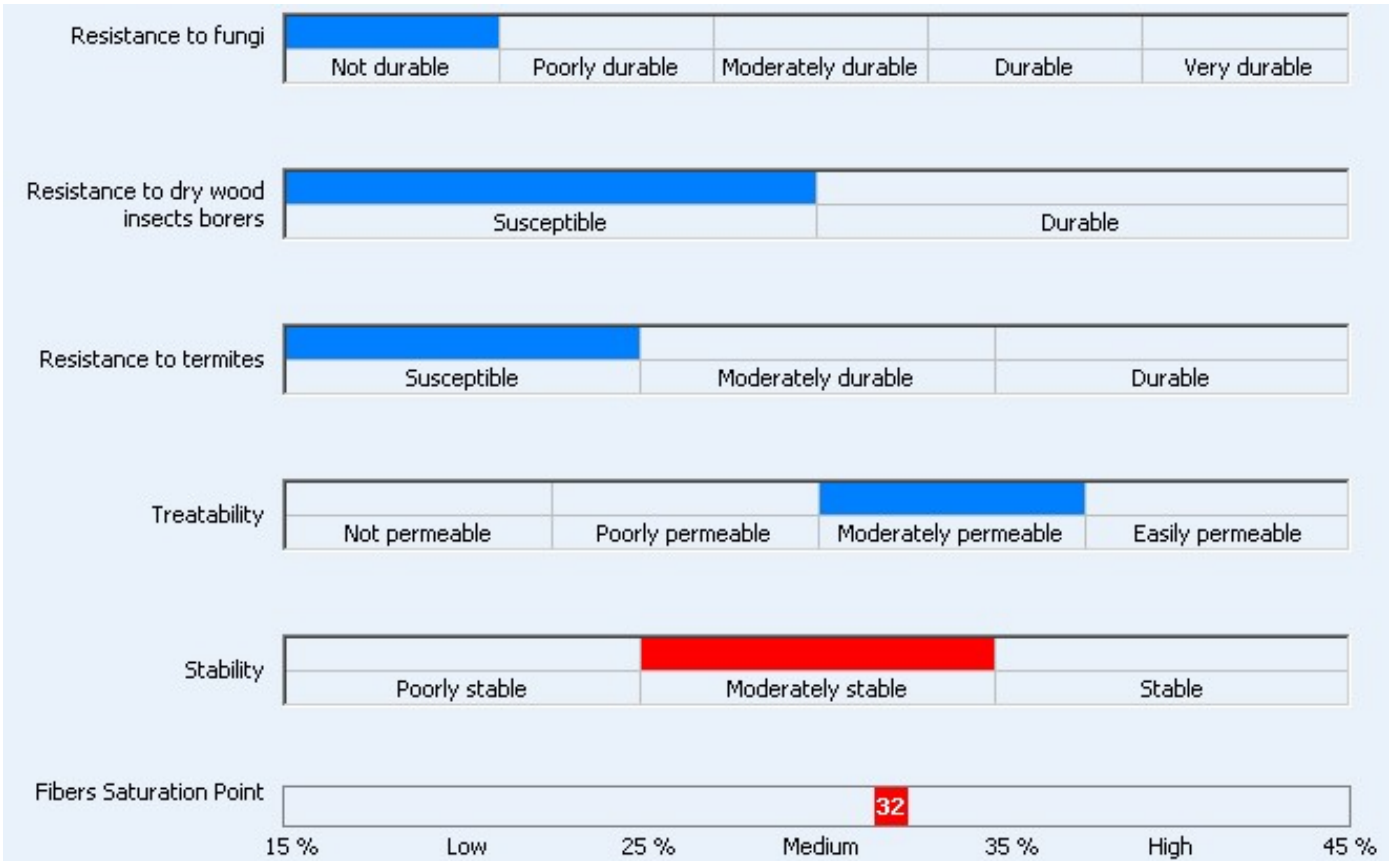
END-USES

Current furniture or furniture components
Veneer for back or face of plywood
Cabinetwork (high class furniture)
Boxes and crates
Interior panelling
Glued laminated
Wood-ware
Sliced veneer
Veneer for interior of plywood
Moulding
Interior joinery
Sculpture
Turned goods
Resistant to one or several acids

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Angola	MIVUKO	Benin	AGBANTIN
Cameroon	ELOLOM	Congo	VUKU
Ivory Coast	BAHIA	Gabon	ELELOM-N'ZAM
Ghana	SUBAHA	Equatorial Guinea	ELELON
Nigeria	ABURA	Uganda	NZINGU
Central African Republic	ORO	Democratic Republic of the Congo	MVUKU
Sierra Leone	MBOI	Zambia	NZINGU
Germany	SUBAHA	France	BAHIA


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 %