MANSONIA

Family: MALVACEAE (angiosperm)
Scientific name(s): *Mansonia altissima*
Commercial restriction: no commercial restriction
Note: Also called BETE.

WOOD DESCRIPTION

Color: brown
Sapwood: clearly demarcated
Texture: fine
Grain: straight
Interlocked Grain: absent
Note:
Logs are almost floatable.
Wood is yellowish brown to dark grey brown with purplish glints.
Veins are more or less visible.

LOG DESCRIPTION

Diameter: 15.7 – 27.6 inches
Thickness of Sapwood: 0.88– 2 inches
Floats: no
Log Durability: moderate (treatment recommended)

PHYSICAL PROPERTIES

MECHANICAL/ACOUSTIC

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*:	0.66	0.03
Janka Hardness (lbs):	1,290	
Volumetric Shrinkage:	0.44%	0.06%
Total Tangential Shrinkage (TS):	7.4%	0.6%
Total Radial Shrinkage (RS):	4.6%	0.4%
TS/RS Ratio:	1.6	
Fiber Saturation Point:	28%	
Stability:	poorly stable	

	Mean
Crushing Strength*:	8,702 lbf
Static Bending Strength*:	15,954 lbf
Modulus of Elasticity*:	1,975,414 lbf

Musical Quality Factor: 137.7 measured at 2772 Hz

**At 12% moisture content.*

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 1 – very durable
Dry Wood Borers: class D - durable (sapwood demarcated, risk limited to sapwood)
Termites (According to E.N. standards): class D - durable
Treatability (according to E.N. standards): class 4 - not permeable
Use class ensured by natural durability: class 3 – not in ground contact, outside
Species covering the use class 5: no
Note:
Although BETE is mentioned in the natural durability class 1 towards fungi (very durable) in the standard NF EN 350-2, it is important to know that it is sensible to white rot "Coriolus versicolor" attacks, hence it's classification in class 2 (durable.)
According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

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

MANSONIA

DRYING

Drying Rate: normal
Risk of Distortion: no risk or very slight risk
Risk of Casehardening: no
Risk of Checking: high risk
Risk of Collapse: no

Possible Drying Schedule: 2

Temperature (ºF)			
M.C. (%)	**Dry-Bulb**	**Wet-Bulb**	**Air Humidity (%)**
Green	122	116.6	84
40	122	113	75
30	131	116.6	67
20	158	131	47
15	167	136.4	44

This schedule is given for information only and is applicable to thickness lower or equal to 1.5 in. It must be used in compliance with the code of practice. For thickness from 1.5 to 3 in, the air relative humidity should be increased by 5% at each step. For thickness over 3 in, 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

ASSEMBLING

Note: Sawdust may cause dermatitis or mucosa irritation.
Nailing / screwing: good
Gluing: correct

END-USES

Cabinetwork (high class furniture)
Sliced veneer
Interior paneling
Flooring
Exterior and Interior joinery
Ship building (planking and deck)
Veneer for back or face of plywood
Light carpentry
Shingles
Moulding
Turned goods
Rolling shutters
Glued laminate

MAIN LOCAL NAMES

Country	Local Name
Cameroon	Koul
Ivory Coast	Bete
Ghana	Mansonia, Aprono
France	Bete
Congo	Guissepa
Central African Republic	Koul
Nigeria	Ofun
Uganda	Munyama, Eri Kire

Works Cited:

CIRAD'S *Biomass, Wood, Energy, Bioproducts Research Unit (BioWooEB)*
Meier, E. (2015), Wood, United States of America