WENGE

Family: FABACEAE (angiosperm)
Scientific name(s): *Millettia laurentii*
Millettia stuhlmannii
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: dark brown
Sapwood: clearly demarcated
Texture: coarse
Grain: straight
Interlocked Grain: absent
Note: Sometimes, brittle heart and grub hole. Wood is yellow when fresh, becoming dark brown to black brown with light. Presence of alternate light and dark stripes.

LOG DESCRIPTION

Diameter: 23.6– 39.4 inches
Thickness of Sapwood: 0.79– 1.18 inches
Floats: no
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*:	0.87	0.08
Janka Hardness (lbs):	1,930	
Volumetric Shrinkage:	0.69%	0.04%
Total Tangential Shrinkage (TS):	9.1%	
Total Radial Shrinkage (RS):	5.9%	
TS/RS Ratio:	1.5	
Fiber Saturation Point:	22%	

Stability: Moderately stable
Note: Hardness varies from hard to very hard.

MECHANICAL/ACOUSTIC

	Mean
Crushing Strength*:	12,328 lbf
Static Bending Strength*:	20,885 lbf
Modulus of Elasticity*:	3,053,044 lbf

Musical Quality Factor: 135.1 measured at 2619 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 2 - 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 4 – in ground or fresh water contact
Species covering the use class 5: no
Note: This species is listed in the European standard NF EN 350-2.
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: does not require any preservative treatment
In case of risk of permanent humidification: does not require any preservative treatment

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DRYING

Drying Rate: slow
Risk of Distortion: slight risk
Risk of Casehardening: no
Risk of Checking: high risk
Risk of Collapse: no
Note: Usually, few risks of distortion except with thick material.

Possible Drying Schedule: 4

Temperature (ºF)			
M.C. (%)	**Dry-Bulb**	**Wet-Bulb**	**Air Humidity (%)**
Green	107.6	102.2	82
50	118.4	109.4	74
40	118.4	109.4	74
30	118.4	109.4	74
15	129.2	114.8	63

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: fairly high
Sawteeth Recommended: stellite-tipped
Cutting Tools: tungsten carbide
Peeling: not recommended or without interest
Slicing: good
Note: Requires power. Difficult to polish. It is preferrable to apply a finishing wax.

ASSEMBLING

Nailing / screwing: good but pre-boring is necessary
Gluing: poor
Note: Risks of splits when nailing. Gluing is difficult and the wood can be stained.

END-USES

Flooring
Cabinetwork (high class furniture)
Sliced veneer
Interior/Exterior joinery
Interior/Exterior paneling
Sculpture
Turned goods
Current furniture or furniture components
Note: Resistant to one or several acids

MAIN LOCAL NAMES

Country	Local Name
Cameroon	Awoung
Gabon	Awong
Germany	Panga-Panga, Wenge
Mozambique	Jambire
France	Panga-Panga, Wenge
Congo	Wenge
United Kingdom	Panga-Panga

Works Cited:

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