SIPO (UTILE)

Family: MELIACEAE (angiosperm)
Scientific name(s): Entandrophragma utile
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: red brown
Sapwood: clearly demarcated
Texture: medium
Grain: interlocked
Interlocked Grain: slight
Note: Some logs are not floatable. Wood pinkish brown to red brown slightly purplish, with moiré shades. Ribbon like aspect on quarter sawn. Irregular grain.

LOG DESCRIPTION

Diameter: 23.6 – 47 inches
Thickness of Sapwood: 0.80 – 2.4 inches
Floats: yes
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*:	0.62	0.04
Janka Hardness (lbs):	1,080	
Volumetric Shrinkage:	0.42%	0.06%
Total Tangential Shrinkage (TS):	6.4%	0.7%
Total Radial Shrinkage (RS):	4.6%	0.7%
TS/RS Ratio:	1.4	
Fiber Saturation Point:	30%	

Stability: Moderately stable to stable
Note: Hardness varies from soft to fairly hard.

	Mean
Crushing Strength*:	8,122 lbf
Static Bending Strength*:	13,198 lbf
Modulus of Elasticity*:	1,920,299 lbf

Musical Quality Factor: 112.6 measured at 2663 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 2-3 – durable to moderately durable
Dry Wood Borers: class D - durable (sapwood demarcated, risk limited to sapwood)
Termites (According to E.N. standards): class M – moderately durable
Treatability (according to E.N. standards): class 4 - not permeable
Use class ensured by natural durability: class 2 – inside or under cover (dampness possible)
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: 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

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DRYING

Drying Rate: normal
Risk of Distortion: slight risk
Risk of Casehardening: no
Risk of Checking: slight risk
Risk of Collapse: no
Note: The risks of distortion increase in presence of highly interlocked grain especially during kiln drying. Original shakes tend to extend.

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
Note: Tendency to tearing due to interlocked grain.

ASSEMBLING

Nailing / screwing: good
Gluing: correct
Note: Gluing must be done carefully: wood may be easily stained.

END-USES

Cabinetwork (high class furniture)
Sliced veneer
Veneer for back or face of plywood
Interior joinery/Exterior joinery
Light carpentry
Stairs (interior)
Open boats
Current furniture or furniture components
Interior paneling
Moulding
Flooring
Rolling shutters
Glued laminate

Note: Filling is recommended in order to obtain a better finish.

MAIN LOCAL NAMES

Country	Local Name
Cameroon	Asseng-Assie
Ivory Coast	Sipo
Ghana	Utile
Congo	Kalungi
Central African Republic	Bokoi
Nigeria	Utile
Uganda	Mufumbi
Germany	Sipo-Mahogany
United Kingdom	Utile

Works Cited:

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