Muhuhu

Family. Asteraceae

Botanical Name(s).

Brachylaena huillensis

Brachylaena hutchinsii (synonymous)

Continent. Africa

CITES. This species is not listed in the CITES Appendices (Washington Convention 2023).

Quarter sawn

Flat sawn

Description of logs

Diameter. From 40 to 50 cm

Thickness of sapwood. From 2 to 4 cm

Floats. No

Log durability. Good

Description of wood

Colour reference. Yellow brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Interlocked

Interlocked grain. Marked

Notes. Small diameter logs. Sapwood greyish white. Heartwood yellow brown to greenish brown.

Physics and mechanics

The properties indicated are for mature wood. These properties may vary significantly depending on the origin and growing conditions of the wood.

Property	Average value
Specific gravity[1]	0.93
Monnin hardness[1]	7.9
Coefficient of volumetric shrinkage	
Total tangential shrinkage (St)	5.3 %
Total radial shrinkage (Sr)	3.5 %
Ratio St/Sr	1.5
Fibre saturation point	
Thermal conductivity (λ)	0.30 W/(m.K)
Lower heating value	
Crushing strength[1]	65 MPa
Static bending strength[1]	134 MPa
Modulus of elasticity[1]	13,630 MPa

[1] At 12 % moisture content, with 1 MPa = 1 N/mm

Natural durability and preservation

Resistance to fungi. Class 1 - very durable

Resistance to dry wood borers. Class D - durable (sapwood demarcated, risk limited to sapwood)

Resistance to termites. Class D - durable

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 4 - in ground or fresh water contact

Notes. This species is listed in the European standard NF EN 350 (2016). This species naturally covers the use class 5 (wood permanently or regularly submerged in salt water, sea water or brackish water) due to its high hardness. According to the European standard NF EN 335 (2013), performance length might be modified by the intensity of end-use exposition.

Requirement of a preservative treatment

Against dry wood borer. Does not require any preservative treatment

In case of temporary humidification. Does not require any preservative treatment

In case of permanent humidification. Does not require any preservative treatment

Drying

Drying rate. Slow

Risk of distorsion. No risk or very slight risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	40	86	17.0
Prewarm 2	4	> 50	43	85	16.5
Drying		> 50	45	83	15.7
		50 - 40	45	80.0	14.6
		40 - 35	45	77.0	13.8
		35 - 30	45	74.0	12.9
		30 - 27	47	69.0	11.5
		27 - 24	49	61.0	9.9
		24 - 21	50	52.0	8.4
		21 - 18	53	48.0	7.7
		18 - 15	56	41.0	6.6
		15 - 12	59	36.0	5.9
		12 - 9	61	30.0	5.0
		9 - 6	65	29.0	4.7
Conditioning	8		58	(3)	(2)
Cooling	(1)		Stop	(3)	(2)

(1)) Cooling: until the temperature inside the kiln no longer exceeds external temperature by more than 30 °C.

(2) UGL = final H% x 0,8 to 0,9.

(3) Subtract RH from the UGL determined in (2) and temperature, using the Hailwood-Horrobin equation.

Sawing and machining

Blunting effect. Fairly high

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Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Not recommended or without interest

Slicing. Not recommended or without interest

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. High specific gravity: gluing must be especially performed in compliance with the code of practice.

Commercial grading

Appearance grading for sawn timbers.

According to the ATIBT grading rules (2017), the main choices are: FAS (First And Second), n°1 Common and select, n°2 Common (see details of these rules on the ATIBT website).

Visual grading for structural applications

No visual grading for structural applications

Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)
Thickness < 14 mm: M4 (easily inflammable)

Euroclasses grading. D-s2, d0

Default grading for solid wood, according to requirements of European standard EN 14081-1+A1 (August 2019). It concerns structural graded timber in vertical uses and ceiling with mean density upper 0.35 and thickness upper 22 mm.

End-uses

- Bridges (parts in contact with water or ground)
- Bridges (parts not in contact with water or ground)
- Decking
- Exterior panelling
- Flooring
- Heavy carpentry
- Hydraulic works (fresh water)
- Hydraulic works (seawater)
- Industrial or heavy flooring
- Sculpture
- Turned goods

Notes. Formerly used for its distillate (substitute for Santal). Substitute for Mecrussé.

Main local names

Country	Local name
Kenya	Mkalambaki
Kenya	Mkarambati
Tanzania	Muhugwe
Uganda	Muhuhu
Uganda	Mvumo

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