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# ZAMBEZI TEAK TECHNICAL DATASHEET

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## BRIEF:

Common Name(s): Rhodesian Teak, Zambezi Teak, Zambesi Redwood, Mukusi

Botanical Name: Baikaea Plurijuga

Family: Fabaceae

Distribution: Primarily Zimbabwe and neighboring SADC countries.

Commercial Restrictions: Wood Species not listed in CITIES Appendices. Does not at Present time meet the RED LIST criteria of a vulnerable or Endangered species.

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## WOOD PROFILE:

Colour/ Appearance: Heartwood is medium reddish brown.

Grain/ Texture: Grain is straight to interlocked, with a fine, even texture and low natural lusture.

Endgrain: Diffuse porous; solitary and radial multiples; small to medium pores in no specific arrangement, moderately numerous; parenchyma Vacisentric, banded; narrow to medium rays.

Odour: No characteristic odour

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## PHYSICAL AND MECHANICAL PROFILE:

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

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Average dried weight: 56lbs/ft<sup>2</sup> [890kg/m<sup>3</sup>]

Specific Gravity (*Basic 12% MC*): .73, .89

Janka Hardness: 2,990lb $f$ /in<sup>2</sup> (13,300 N)

Modulus of Rupture: 12,220 lb $f$ /in<sup>2</sup> (84.3 MPa)

Elastic Modulus: 1,230,000 lbf/in<sup>2</sup> (8.48 GPa)

Crushing Strength: 9, 600 lbf/in<sup>2</sup> (66.2 MPa)

Shrinkage: Radial: 2.6%, Tangential: 4.5%, Volumetric: 6.9%, T/R Ratio: 1.7

Density at 10% Moisture content: 930kg per m<sup>3</sup>

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## 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

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Fungi (according to E.N. standards): class 1 – very durable

Dry wood borers: durable – risk limited to sapwoods

Termites (according to E.N. standards): very 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: Yes

Note: According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition. This species naturally covers the use class 5 (end-uses in marine environment or brackish water) due to its high silica content.

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## REQUIREMENT OF PRESERVATIVE TREATMENT

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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 permanent humidification: does not require any preservative treatment

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## DRYING

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Drying rate: Slow

Risk of distortion: no risk or very slight risk

Risk of casehardening: no

Risk of checking: no

Risk of collapse: no

Note: The drying rate may vary from one board to other by reason of the specific gravity and

Important differences of moisture content when green.

Possible drying schedule: 6

M.C. %	Temperature		Air humidity
	dry-bulb	wet-bulb	
Green	42	41	94
50	48	43	74
30	54	46	63
20	60	51	62
15	60	51	62

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 75mm, the air relative humidity should be increased by 5% at each step.

For thickness over 75mm, a 10% increase should be considered.

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## SAWING AND MACHINING

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Blunting effect: High

Sawteeth recommended: satellite - tipped

Cutting tools: tungsten carbide

Peeling: not recommended or without interest

Slicing: nood

Note: Variable silica content. Sawdust may cause skin irritations

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## ASSEMBLING

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Nailing / screwing: good but pre-boring necessary

Gluing: correct

Note: Pre-boring recommended due to a slight tendency to split when nailing.

Satisfactory

Gluing on surfaces freshly machined or sanded ( the wood contains oleoresins)

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## COMMERCIAL GRADING

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Appearance grading for sawn timbers: Grading depending on the source and uses

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## FIRE SAFETY

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Conventional French grading: Thickness > 14mm : M.3 (moderately inflammable)

Thickness < 14mm : M.4 (easily inflammable)

Euroclasses grading: D s2 d0

Default grading for solid wood, according to the 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 22mm.

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## END USES

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Flooring

Ship building (planking and deck)

Cooperage

Stairs

Bridges

Interior paneling

Cabinetwork (high class furniture)

Arched goods

Exterior joinery

Interior joinery

Open boats

Sliced veneer

Turned goods

Exterior paneling

Rolling shutters

Stakes

Heavy carpentry

Stringed instruments

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## TEAK

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TEAK ENDGRAIN

