

Family: BIGNONIACEAE (angiosperm)
Scientific name(s): *Handroanthus spp.*
Tabebuia spp. (synonymous)

Commercial restriction: No commercial restriction

Note: Woods called IPE belong actually to the *Handroanthus* genus. Previously, they belonged to *Tabebuia* genus (heavy species only.)

WOOD DESCRIPTION

Color: brown
Sapwood: clearly demarcated
Texture: fine
Grain: interlocked
Interlocked Grain: marked

Note: Some species have a medium texture. Heartwood is yellowish brown to dark olive brown, sometimes with thin veins. Canals contain a greenish yellow deposit (lapachol.)

LOG DESCRIPTION

Diameter: 23.6 – 39.4 inches
Thickness of Sapwood: 1.2 – 3.5 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.

	<u>Mean</u>	<u>Std. Dev.</u>
Specific Gravity*:	1.04	0.09
Janka Hardness (lbs):	3,510	
Volumetric Shrinkage:	0.68%	0.09%
Total Tangential Shrinkage (TS):	6.4%	0.9%
Total Radial Shrinkage (RS):	5.1%	0.5%
TS/RS Ratio:	1.3	
Fiber Saturation Point:	20%	
Stability:	Moderately stable	

MECHANICAL/ACOUSTIC

	<u>Mean</u>
Crushing Strength*:	13,778.6 lbf
Static Bending Strength*:	24,076.3 lbf
Modulus of Elasticity*:	3,301,058.9 lbf
Musical Quality Factor:	166.9 measured at 2,346 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 4 - in ground or fresh water contact
Species covering the use class 5:	yes

Note: This species naturally covers the use class 5 (end-uses in marine environment or in brackish water) due to its high specific gravity and hardness. According to the European standard NF 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

DRYING

Drying Rate: slow
Risk of Distortion: slight risk
Risk of Casehardening: no
Risk of Checking: slight risk
Risk of Collapse: no

Note: Slow kiln drying is recommended to reduce defects, especially with thick boards.

M.C. (%)	Temperature (°F)		Air Humidity (%)
	Dry-Bulb	Wet-Bulb	
30	107.6	105.8	94
25	107.6	102.2	82
20	118.4	109.4	74
15	118.4	109.4	74

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: Sawdust may cause dermatosis. Some difficulties due to interlocked grain.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: correct
Note: Gluing must be done carefully: wood may be easily stained.

END-USES

Cabinetwork (high class furniture)
Current furniture or furniture components
Bridges (parts in and not in contact with water or ground)
Ship building (planking and deck)
Stakes
Moulding
Stairs (inside)
Turned objects
Tool handles (resilient woods)
Hydraulic works (seawater and fresh water)
Sliced veneer
Sleepers
Industrial or heavy flooring
Poles
Heavy Carpentry
Musical instruments
Vehicle or container flooring

Note: Filling is recommended to obtain a good finish.

Works Cited:

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

MAIN LOCAL NAMES

Country	Local Name
Argentina	Lapacho
Bolivia	Lapacho, Ipe, Tajibo
Brazil	Ipe, Pau D'Arco, Ipe Roxo
Colombia	Polvillo, Canaguante, Roble Morado
Guyana	Hakia
Peru	Ebano Verde, Tahuari
Guyana	Ironwood
Venezuela	Acapro, Araguaney, Puy