TACHI

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)
Scientific name(s): Sclerolobium spp.
Tachigalia spp. (synonymous)
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light brown
Sapwood: clearly demarcated
Texture: medium
Grain: straight or interlocked
Interlocked grain: slight

LOG DESCRIPTION

Diameter: from 70 to 100 cm
Thickness of sapwood: from 3 to 6 cm
Floats: no information available
Log durability: low (must be treated)

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 *:	0,62	0,10
Monnin hardness *:	3,5	1,7
Coeff. of volumetric shrinkage:	0,51 %	0,10 %
Total tangential shrinkage (TS):	8,2 %	1,2 %
Total radial shrinkage (RS):	4,8 %	0,3 %
TS/RS ratio:	1,7	
Fiber saturation point:	26 %	

Stability: poorly stable

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	58 MPa	8 MPa
Static bending strength *:	105 MPa	12 MPa
Modulus of elasticity *:	17100 MPa	2200 MPa

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

Musical quality factor: 100,6 measured at 3147 Hz

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 4 - poorly durable
Dry wood borers: susceptible
Termites (according to E.N. standards): class S - susceptible
Treatability (according to E.N. standards): class 3 - poorly permeable
Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)
Species covering the use class 5: No

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: requires appropriate preservative treatment
In case of risk of temporary humidification: requires appropriate preservative treatment
In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: normal
Risk of distortion: slight risk
Risk of casehardening: no
Risk of checking: high risk
Risk of collapse: yes
Note: Artificial drying must be careful to avoid the appearance of checking and inside splitting.

Possible drying schedule: 4

	Temperature (°C)		
M.C. (%)	dry-bulb	wet-bulb	Air humidity (%)
Green	42	39	82
50	48	43	74
40	48	43	74
30	48	43	74
15	54	46	63

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 75 mm, the air relative humidity should be increased by 5 % at each step.
For thickness over 75 mm, a 10 % increase should be considered.

SAWING AND MACHINING

Blunting effect: normal
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: not recommended or without interest
Slicing: not recommended or without interest
Note: Machining dust is highly irritating.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: no information available
Note: Wood tends to split.

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to NHLA grading rules (January 2007)
Possible grading: FAS, Select, Common 1, Common 2, Common 4
In French Guiana, the local name of this species is "DIAGUIDIA". Grading is done according to local rules "Bois guyanais classés".
Possible grading: Choix 1, choix 2, choix 3, choix 4

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)
Thickness < 14 mm : M.4 (easily inflammable)

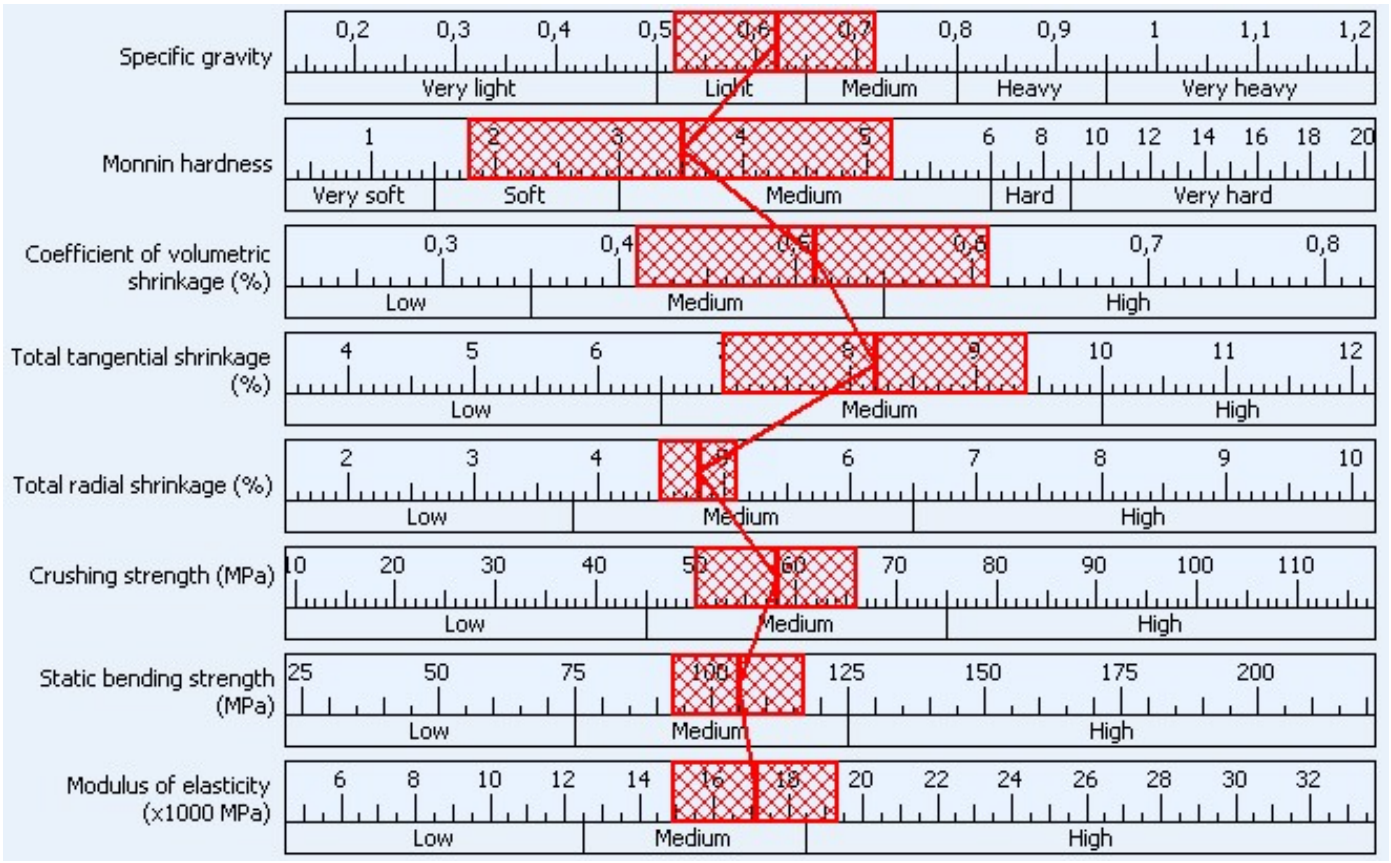
Euroclasses grading: D s2 d0
Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

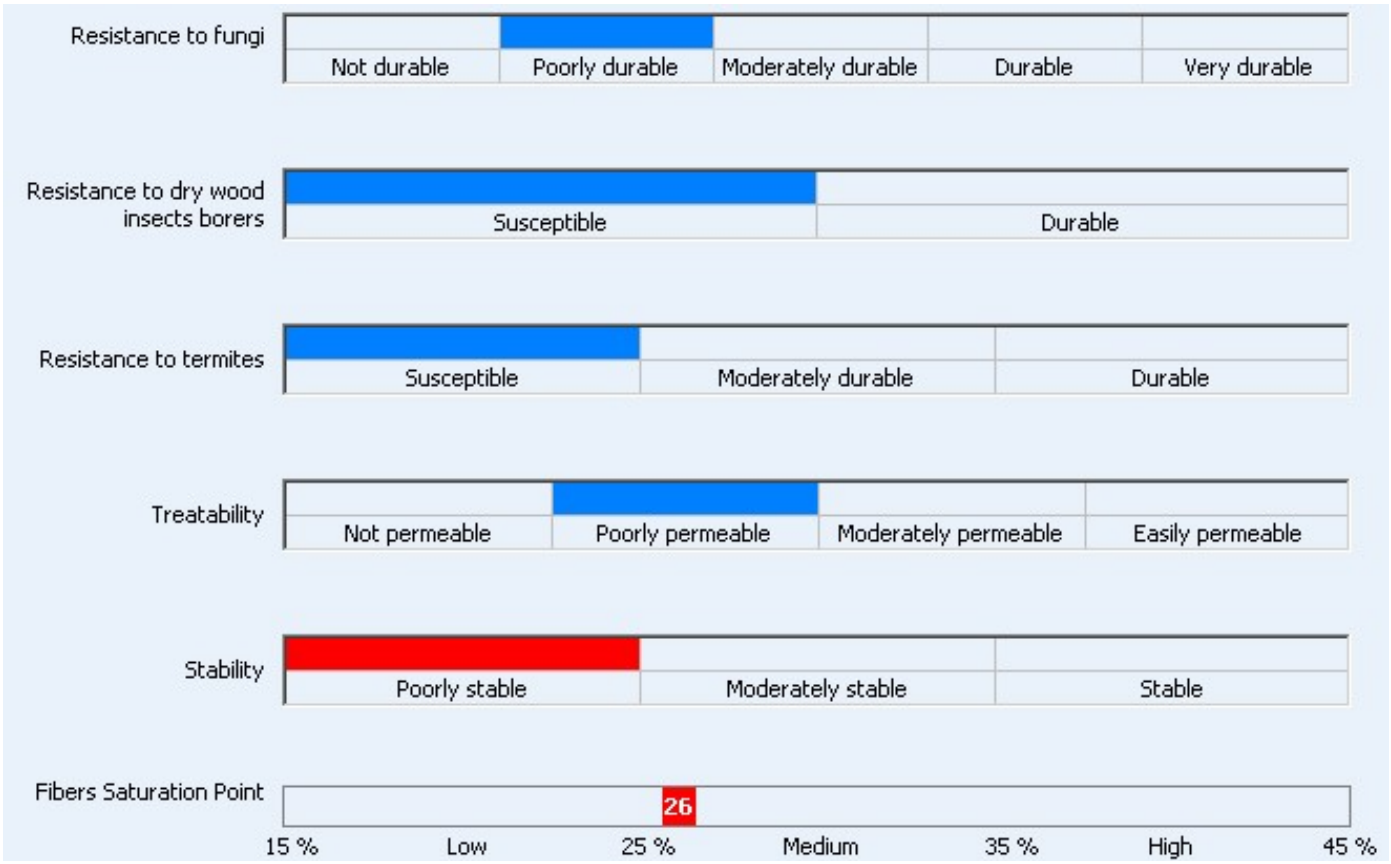
END-USES

Interior joinery
Current furniture or furniture components
Moulding
Interior panelling
Boxes and crates
Light carpentry

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Brazil	APARAÇU	Brazil	PACUARE
Brazil	TACHI	Brazil	TACHIGALIA
Brazil	TAEHI PRETO	Ecuador	GUABILLO
Ecuador	MATAPALO	Guyana	DJEDOE
Guyana	KADITIRI	French Guiana	CEDRE REMI
French Guiana	DIAGUIDIA	Suriname	DJARKIDJA
Suriname	ROODE DJEDOE	Venezuela	CONGRIO
Venezuela	GUAMILLO		


Specific gravity
0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 1,1 1,2
Very light
Light
Medium
Heavy
Very heavy
Monnin hardness
1 2 3 4 5 6 8 10 12 14 16 18 20
Very soft
Soft
Medium
Hard
Very hard
Coefficient of volumetric shrinkage (%)
0,3 0,4 0,5 0,6 0,7 0,8
Low
Medium
High
Total tangential shrinkage (%)
4 5 6 7 8 9 10 11 12
Low
Medium
High
Total radial shrinkage (%)
2 3 4 5 6 7 8 9 10
Low
Medium
High
Crushing strength (MPa)
10 20 30 40 50 60 70 80 90 100 110
Low
Medium
High
Static bending strength (MPa)
25 50 75 100 125 150 175 200
Low
Medium
High
Modulus of elasticity (x1000 MPa)
6 8 10 12 14 16 18 20 22 24 26 28 30 32
Low
Medium
High


Resistance to fungi
Not durable
Poorly durable
Moderately durable
Durable
Very durable
Resistance to dry wood insects borers
Susceptible
Durable
Resistance to termites
Susceptible
Moderately durable
Durable
Treatability
Not permeable
Poorly permeable
Moderately permeable
Easily permeable
Stability
Poorly stable
Moderately stable
Stable
Fibers Saturation Point
26
15 %
Low
25 %
Medium
35 %
High
45 %