

TEAK

Technical Wood Sheet (*Tectona grandis*)

Family: Lamiaceae | **Continent:** Asia-Oceania

Botanical Name(s): *Tectona grandis*.

CITES: This species is not listed in the CITES Appendices (Washington Convention 2023). Notes. Native to South-East Asia, this species has been widely planted throughout the tropical and subtropical world.



DESCRIPTION OF LOGS

Diameter	From 50 to 100 cm
Thickness of sapwood	From 2 to 6 cm
Floats	No
Log durability	Good

DESCRIPTION OF WOOD

Colour reference	Yellow brown
Sapwood	Clearly demarcated
Texture	Coarse
Grain	Straight
Interlocked grain	Absent

Notes: The wood darkens and presents golden glints with age. Sometimes black brown veins. Oily to the touch.

PHYSICS AND MECHANICS

Values for mature wood at 12% moisture content. 1 MPa = 1 N/mm²

Property	Avg. value
Specific gravity	0.67
Monnin hardness	4.2
Coef. volumetric shrinkage	0.34 % / %
Total tangential shrinkage (St)	4.7 %
Total radial shrinkage (Sr)	2.6 %
Ratio St/Sr	1.8
Fibre saturation point	24 %
Thermal conductivity (λ)	0.22 W/(m.K)
Lower heating value	19,270 kJ/kg
Crushing strength	56 MPa
Static bending strength	98 MPa
Modulus of elasticity	13,740 MPa

NATURAL DURABILITY & PRESERVATION

Resistance to fungi	Class 1 to 3 — very durable to mod. durable (according to origin and age of the
Dry wood borers	Class D — durable*
Resistance to termites	Class M — mod. durable
Treatability	Class 3-4 — poorly permeable
Use class	Class 3 (not in ground contact, outside) to class 4 (in ground or fresh water contact), according to origin

* sapwood demarcated, risk limited to sapwood

PRESERVATIVE TREATMENT REQUIREMENT

Against dry wood borers	Not required
Temp. humidification	Not required
Perm. humidification	Not required (when class 1 or 2 for natural)

SAWING AND MACHINING

Blunting effect	High
Sawteeth recommended	Stellite-tipped
Cutting tools	Tungsten carbide
Peeling / Slicing	Not recommended or without interest / Good

Notes: Variable silica content. Sawdust may cause skin irritations.

ASSEMBLING

Nailing and screwing	Good but pre-boring necessary
----------------------	-------------------------------

COMMERCIAL GRADING

Appearance grading for sawn timbers. Plantation teak producers offer different grading rules for sawn timber. In this respect, Latin American producers offer 5 choices: Premium grade, AB grade, B/B grade, B/C grade, C grade. Visual grading for structural applications According to European standard EN 1912 (2012) and associated national standards, strength class D40 can be provided by visual grading. Strength class D30 can also be provided by visual grading according to French standard NF B 52-001-1 (2018).

DRYING

Drying rate	Slow
Risk of distortion	No risk or very slight risk
Risk of casehardening	No known specific risk
Risk of checking	No risk or very slight risk
Risk of collapse	No known specific risk

Notes: The drying rate may vary from one board to other by reason of the specific gravity and the important differences of moisture content when green.

FIRE SAFETY

Thickness > 14 mm	M3 (mod. inflammable)
Thickness < 14 mm	M4 (easily inflammable)
Euroclasses grading	D-s2, d0

MAIN LOCAL NAMES

Costa	Rica
Côte d'Ivoire	Teck

END-USES

Arched goods			
Bridges (parts in contact with water or ground)			
Bridges (parts not in contact with water or ground)			
Cabinetwork	Cooperage	Decking	Exterior joinery
Exterior panelling	Flooring	Indoor staircases	
Interior joinery	Interior panelling	Light carpentry	
Open boats	Poles	Rolling shutters	
Ship building (planking and deck)	Sliced veneer		
Stakes	Turned goods		