

CHECHÉN

Botanical name: *Metopium brownei*, Family Anacardiaceae.

Geographic distribution: Southeastern Mexico, Central America (Belize, Guatemala), Caribbean (Cuba, Jamaica).

Other names: Boxcheché, Chechem, chechén negro, kabal chechen, palo de rosa (MX); black poisonwood (US).

CITES protection status: Not protected

Background: The main limitation for using this species' wood are the skin irritations caused by its caustic resin in sensitive individuals, as well as sawdust that can cause intense skin allergies and respiratory tract conditions. Even the catechols and flavonoids in its leaves and bark show potential phytotoxic effects.

Wood characteristics: Heartwood with highly variable colors ranging from brown, reddish, orange and yellow, with pronounced dark brown to nearly black streaks; distinct from pinkish-cream colored sapwood. Growth ring boundaries macroscopically distinct, marked by fine bands of marginal parenchyma. Very attractive pronounced grain, fine to medium texture, straight to interlocked grain. Dry wood with no distinctive odor.

Physical Properties		
Green weight [kg/m³]	1226	
Air-dry density (12% MC) [g/cm³]	0.88	
Shrinkage radial [%] tangential [%]	Total*	Normal**
	3.2	0.9
	6.8	2.6
Differential swelling [%/%]	radial:0.15 tangential: 0.30	
Dimensional stability	fair	
Mechanical Properties		
Compressive strength (parallel, 12% MC)[N/mm²]	47–57–68	
Bending strength (12% MC) [N/mm²]	73–93–113	
Modulus of elasticity (bending, 12% MC) [N/mm²]	8004–9858–11712	
Impact resistance (10% MC) [kJ/m²]	30–47–63	
Shear strength (12% MC) [N/mm²]	14–16–18	
JANKA hardness (side, 12% MC) [kN]	9–12–15	
BRINELL hardness (side, 12% MC) [N/mm²]	35–45–54	

*Green to dry (0% moisture); **Green to 12% moisture

Workability: Heavy and hard wood, somewhat difficult to work manually but easy in various machining operations. Tools with tungsten carbide or stellite tips are recommended. Allows good finishing. Good behavior in mortising and molding, good in drilling; longitudinal cutting with circular saw shows minimal surface defects due to friction burns caused by residual internal stresses; good for gluing with common white glue. Pre-drilling is required for nailing and screwing.

Drying: Very low permeability wood resulting in very prolonged air drying (6 months) while maintaining high moisture content (partially near fiber saturation point); with residual internal stresses after conventional technical drying, and even despite conditioning, deformations occur when cutting with band or circular saws. Its technical drying requires mild programs such as US: T2-C2 for boards 2.5 to 3.8 cm thick.

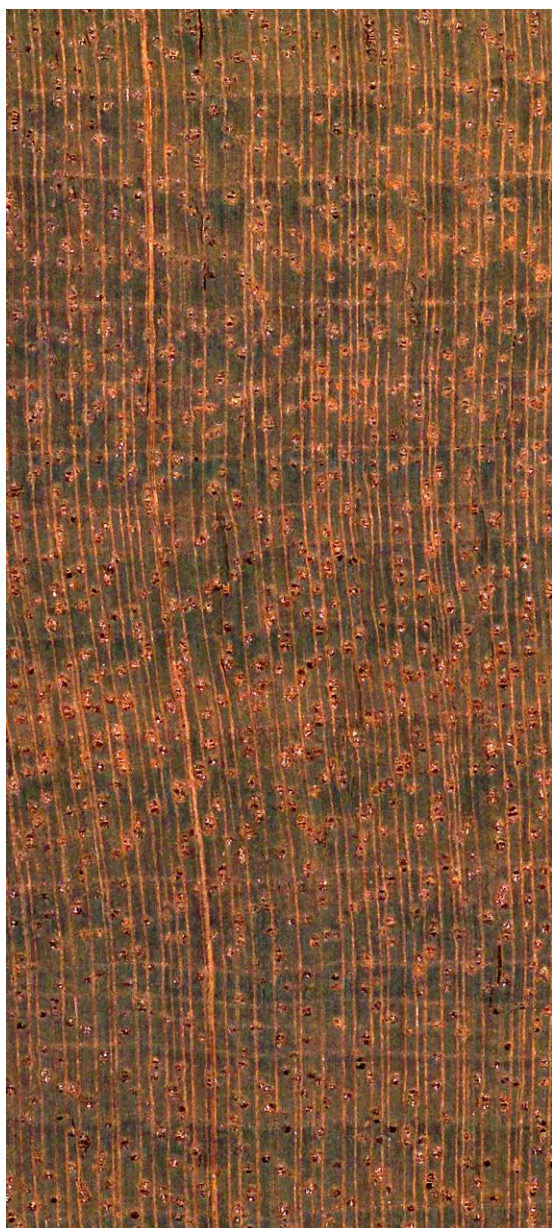
Natural durability: Heartwood resistant (class 2 according to ASTM D 2017-71) to moderately resistant (class 3 according to EN 350-1) to decay fungi; the wood has a reputation for being termite-resistant.

Uses: Flooring strips, parquet, engineered flooring, stairs (steps); decorative sliced veneers, carpentry, fine furniture, moldings, crafts, watch cases, urns, turned pieces.

Warning: Contact with dust generated during machining can cause skin and mucous membrane irritation in susceptible individuals. As preventive measures, use of face masks and efficient extractors is recommended in all machining operations. The wood is not recommended for objects in contact with water and food.

Bibliography

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- Pennington, T.D. y Sarukhán, J. 1998. Árboles tropicales de México. Universidad Nacional Autónoma de México, Fondo de Cultura Económica. 521 pp.
- Vester, H.F.M. y Navarro Martínez, A. 2007. Árboles maderables de Quintana Roo. Fichas ecológicas. CONACYT y Colegio de la Frontera Sur, Chetumal, Q. Roo. 139 pp.



Metopium brownei. Cross-section (approx. 12x magnification).



Metopium brownei. Surface: tangential face (natural size).