



**USDA Forest Service
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Wood Technical Fact Sheet

Rhizophora mangle

Mangle Colorado

Red Mangrove

Family: Rhizophoraceae

Other Common Names: Candelon, Mangle dulce (Mexico), Mangle rojo (Colombia), Purgua (Venezuela), Apareiba, Mangue sapateiro (Brazil), Mangle geli (Ecuador).

Distribution: Coastal areas and brackish stream banks from central and southern Florida southward to Ecuador, northwestern Peru, and Brazil, including the West Indies. Also in Melanesia, Polynesia, and the Galapagos Islands.

The Tree: On favorable sites trees may reach heights of 100 ft with trunk diameters 18 to 24, sometimes up to 36 in., with clear boles to 30 to 40 ft. Stems develop stilt- like roots forming impenetrable thickets.

The Wood:

General Characteristics: Heartwood light red, deepening to dark red or reddish brown sometimes purplish; uniform or more or less striped; rather sharply defined from the yellowish, grayish, or pinkish sapwood. Texture fine to medium; grain straight to irregular; luster low; without distinctive odor or taste.

Weight: Basic specific gravity (ovendry weight/green volume) 0.89; air-dry density 67 pcf.

Mechanical Properties: (2-in. standard)

Moisture content Bending strength Modulus of elasticity Maximum crushing strength
(%) (Psi) (1,000 psi) (Psi)

Green (49) 15,200 2,300 6,490

12% 21,700 2,950 10,750

12% (44) 24,000 3,260 NA

15% (5) 28,400 3,480 13,500

Janka side hardness 2,240 lb for green material and 2,760 lb at 12% moisture content.

Drying and Shrinkage: Drying rate is moderate during air-seasoning; warp is severe as is surface and end checking. No data available on kiln schedules. Shrinkage green to oven-dry: radial 5.0%; tangential 10.7%; volumetric 14.3%.

Working Properties: Generally difficult to work because of its high density; can finish smoothly where grain is straight.

Durability: Heartwood is reported to be resistant to attack by decay fungi but not marine borers and dry-wood termites.

Preservation: Both heartwood and sapwood resistant to impregnation.

Uses: Boat construction, general heavy construction, charcoal, railroad crossties, turnery, bark has a high tannin content (30% based on oven-dry weight) and is used commercially.

Additional Reading: (5), (44), (49)