



Ceiba pentandra

Family: Bombacaceae

Ceiba

Silk-Cotton-tree

Kapok-tree

Other Common Names: Fromager (French West Indies), Pochota, Yaxché (Mexico), Bonga, Ceiba de lana (Colombia), Ceiba yuca (Venezuela), Sumaúma (Brazil), Taborochi (Bolivia).

Distribution: Throughout the tropical world; from the Tropic of Cancer in Mexico southward through Central America to Colombia, Venezuela, Brazil, and Ecuador. Also West Africa and Malay Peninsula. Characteristically an open-grown tree.

The Tree: A very large tree with a height of 150 ft and a diameter of 7 ft above the buttresses, which often are of a plank form and wide spreading; the trunk which is cylindrical or at times thicker in the middle, is smooth or covered with larger conical spines.

The Wood:

General Characteristics: Heartwood pinkish white to ashy brown when dry and not clearly distinguished from the sapwood. Luster low; grain generally straight, sometimes irregular; texture coarse with a harsh feel; without distinctive odor or taste.

Weight: Basic specific gravity (ovendry weight/green volume) 0.25; air-dry density 18 pcf.

Mechanical Properties: (2-in. standard)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (73)	2,180	410	1,060
12%	4,330	540	2,380
15% (24)	3,980	—	2,490

Janka side hardness 220 lb for green wood and 240 lb for dry. Forest Products Laboratory toughness average for green and dry material is 24 in.-lb. (5/8-in. specimen).

Drying and Shrinkage: Air-dries rapidly with little warp or checking; also easy to kiln-dry. Kiln schedule T10-D5S is suggested for 4/4 stock and schedule T8-D4S for 8/4. Shrinkage green to ovendry: radial 2.1%; tangential 4.1%; volumetric 7.7%. Movement in service is rated small.

Working Properties: The wood is easy to machine but not satisfactorily; sawed surfaces are fuzzy; tears the grain in shaping, boring, turning, and mortising, but gives excellent results in planing and sanding. Poor nail- and screw-holding properties. Easy to peel into veneers.

Durability: Laboratory test indicate nondurable to white-rot fungus attack but durable to very durable when exposed to brown rot. Rated as extremely vulnerable to decay when in ground contact, also very susceptible to insect attack. Logs and lumber often discolored by sap-staining fungi.

Preservation: Easy to treat with good absorption and penetration using either pressure-vacuum systems or open tank methods.

Uses: Plywood, packaging, lumber core stock, light construction, pulp and paper products, also used locally for canoes and rafts. Floss on seeds (kapok) harvested for use in buoys, life belts, stuffing pillows, and similar articles.

Additional Reading:: (34), (41), (71), (73)

34. Japing, H.W. 1957. Tests of the most important mechanical and physical properties of 41 Surnam wood species. Meded. Inst. Trop. Amst. No. 122 (Afd. trop. Prod. No. 46).

41. Laboratoria Nacional de Productos Forestales. 1974 . Carateristicas, propiedades, y usos de 104 maderas de los altos llanos occidentalis. Universidad de Los Andes, Merida.

71. Villamil G. F. (Editor). 1971 Maderas colombianas. Proexpo, Bogotá.

73. Wangaard, F.F., A. Koehler, and A.F. Muschler. 1954. Properties and uses of tropical woods, IV. Tropical Woods No. 991:1-187

From: Chudnoff, Martin. 1984. Tropical Timbers of the World. USDA Forest Service. Ag. Handbook No. 607.