

Technology Transfer Fact Sheet**Center for Wood Anatomy Research**

USDA Forest Service • Forest Products Laboratory • One Gifford Pinchot Drive • Madison, Wisconsin 53726-2398

Tabebuia spp.

(Lapacho group)

Family: Bignoniaceae

Ipe

Print

Bethabara

Lapacho

Other Common Names: Amapa (Mexico), Cortez (Honduras, Nicaragua, Costa Rica), Guayacan (Panama), Guayacan polvillo (Colombia), Flor Amarillo (Venezuela), Greenhart (Surinam), Madera negra (Ecuador), Tahuari (Peru), Ipe (Brazil), Lapacho negro (Paraguay, Argentina).

Distribution: Throughout continental tropical America and some of the Lesser Antilles. The tree grows on a variety of sites, from ridge tops to riverbanks and marsh forests.

The Tree: May grow to 140 to 150 ft in height with trunk diameters of 6 ft. Frequently to heights of 100 ft and diameters of 2 to 3 ft. Boles are clear to 60 ft and more, with or without buttresses.

The Wood:

General Characteristics: Heartwood olive brown to blackish, often with lighter or darker striping, often covered with a yellow powder; sharply demarcated from the whitish or yellowish sapwood. Texture fine to medium; luster low to medium; grain straight to very irregular; rather oily looking; without distinctive odor or taste.

Weight: Basic specific gravity (ovendry weight/green volume) 0.85 to 0.97; air-dry density 66 to 75 pcf.

Mechanical Properties: (First and third sets of data based on the 2-in. standard, the second on the 1-in. standard.)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (73)	22,560	2,920	10,350
12%	25,360	3,140	13,010
12% (24)	25,200	3,010	14,000
12% (44)	28,000	3,350	NA

Janka side hardness 3,060 lb for green material and 3,680 lb at 12% moisture content. Forest Products Laboratory toughness average for green and dry material is 404 in.-lb. (5/8-in. specimen).

Drying and Shrinkage: Generally reported to air-dry rapidly with only slight checking and warping. Kiln schedule T3-C1 is suggested for 4/4 stock. Shrinkage green to oven-dry: radial 6.6%; tangential 8.0%; volumetric 13.2%. Movement after manufacture is rated as small.

Working Properties: Moderately difficult to work especially with hand tools; has a blunting effect on cutting edges, finishes smoothly except where grain is very roey. The fine yellow dust produced in most operations may cause dermatitis in some workers.

Durability: Heartwood is very resistant to attack by decay fungi and termites; not resistant to marine borers. *T. guayacan* however, is reported to have good resistance in Panama waters.

Preservation: The wood is reported to be extremely resistant to preservation treatments.

Uses: Railroad crossties, heavy construction, tool handles, turnery, industrial flooring, textile mill items, decorative veneers.

Additional Reading: (24), (44), (46), (73)

24. Food and Agriculture Organization. 1970. Estudio de preinversion para el desarrollo forestal de la Guyana Venezolana. Informe final. Tomo III. Las maderas del area del proyecto. FAO Report FAO/SF: 82 VEN 5. Rome.
44. Llach, C. L. 1971. Properties and uses of 113 timber-yielding species of Panama. Part 3. Physical and mechanical properties of 113 tree species. FO-UNDP/PAN/6. FAO, Rome.
46. Longwood, F. R. 1962. Present and potential commercial timbers of the Caribbean. Agriculture Handbook No. 207. U.S. Department of Agriculture.
73. Wangaard, F. F., A. Koehler, and A. F. Muschler. 1954. Properties and uses of tropical woods, IV. Tropical Woods No. 99:1-187.

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