



USDA Forest Service
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Wood Technical Fact Sheet

Virola spp.

Family: Myristicaceae

Banak

Baboen

Other Common Names: Sangre, Palo de sangre (Guatemala, Honduras), Sangredrago (Nicaragua), Fruta dorada (Costa Rica), Miguelarillo (Panama), Sangre de toro (Colombia), Camaticaro (Venezuela), Baboen (Surinam), Bicuiba (Brazil), Cumala (Peru).

Distribution: Varying with species from Belize and Guatemala southward to Venezuela the Guianas, the Amazon region of northern Brazil, southern Brazil, and on the Pacific Coast, to Peru and Bolivia; common in swamp and marsh forests.

The Tree: May reach a height of 140 ft with trunk diameters of 5 ft, usually much shorter and only 2 to 3 ft in diameter. Boles are heavily buttressed, cylindrical, and clear for more than two-thirds of total height.

The Wood:

General Characteristics: On drying and exposure, heartwood becomes a pinkish golden brown or deep reddish brown; sapwood cream to tan color, not always sharply demarcated. Luster low to medium; texture rather coarse; grain straight; without distinctive odor or taste.

Weight: Basic specific gravity (ovendry weight/green volume) varies considerably with species from about 0.36 to 0.61, commonly 0.44; air-dry density 27 to 46 pcf.

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

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (73)	5,600	1,640	2,390
12%	10,950	2,040	5,140
Green (42)	6,520	1,380	3,180
12%	11,450	1,610	5,950
12% (24)	7,780	1,280	4,740

Janka side hardness for dry material 450 to 640 lb. Forest Products Laboratory toughness average for green and dry material 61 in.-lb (5/8-in. specimen).

Drying and Shrinkage: Generally reported to be difficult to season with a strong tendency to warp and check as well as collapse and honeycomb; thick stock slow to dry. Kiln schedule T3-C2 suggested for 4/4 stock and T3-C1 for 8/4. Shrinkage green to oven-dry: radial 4.6%; tangential 8.8%; volumetric 13.7%.

Working Properties: Works easily with both hand and machine tools and produces a good finish, glues well; cuts well into veneers.

Durability: The wood is not resistant to attack by decay fungi and is very susceptible to attack by termites and other insects. Logs require prompt conversion or water storage to prevent damage by pinhole borers. Bacterial attack resulting in the formation of odoriferous compounds is also reported.

Preservation: The timber is reported to be easily impregnated with preservatives using either pressure-vacuum or open-tank systems.

Uses: Veneer and plywood, particleboard and fiberboard, furniture components, boxes and crates, light construction, general carpentry, millwork. Oil is extracted from seeds of Virola and used in soaps and candles.

Additional Reading: (24), (42), (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.
42. Lavers, G. M. 1969. The strength properties of timbers. For. Prod. Res. Bull. No. 50. H. M. Stationery Office. London.
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. Ag. Handbook No. 607.