



Determa

Scientific Name: Sextonia rubra; Ocotea Rubra

Family: Lauraceae

Other Names: Wana, Wane (Suriname), Grignon rouge (French Guiana), Louro vermelho (Brazil)

The Tree

Reaches heights of 130 feet with diameters of 5 feet; usually 92-100 feet high with diameters of 2-3 feet; boles are generally basally swollen and clear 40-80 feet.

The Wood

General Characteristics: Heartwood is light reddish brown with a golden sheen. The sapwood is well defined, narrow, and dull grey or pale yellowish brown. It has a resemblance to African mahogany in terms of its coarse grain. The grain is interlocked to straight, quarter sawn lumber is sometimes attractively figured; dry wood is without a distinctive odour or taste.

Weight: Basic specific gravity (oven dry weight/green volume) 0.52 to 0.59; air- dry Density 40-45 pcf.

Drying and Shrinkage: The wood is moderately difficult to air season: drying at a moderate rate with slight checking and moderate warp. Kiln schedule T6-D2 is suggested for 4/4 stock and T3-D1 for 8/4; for 8/4; there is a tendency to warp and check in the kiln. Shrinkage green to oven-dry: radial 3.7%; tangential 7.6%; volumetric 10.4%.

Mechanical Properties: (First set of data based on the 2-cm standard; second on the 2-in. standard).

Moisture Content (%)	Bending Strength (psi)	Maximum Crushing Strength (psi)	Modules of Elasticity (1000 psi)
Green (74)	7,820	3,760	1,460
12%	10,470	5,800	1,820
Green (30)	10,300	5,150	4,450
12%	13,600	7,150	N/A

Janka side hardness 520 lb for green material and 660 lb at 12% moisture content. Forest Products Laboratory toughness average for green and dry material is 75 inches – pound (5/8 – inch specimen). Amsler toughness 137 in-lb at 15% moisture content (2-cm specimen).

Working Properties: Works readily with hand and machine tools with minimum dulling effect; reported to glue readily and polishes fairly well.

Durability: According to graveyard and pure culture tests determa’s heartwood is rated durable. It is resistant to attack by white-rot and dry-wood termites. It is also very resistant to moisture and has excellent weathering characteristics. The wood equals Honduras Mahogany in its resistance to termites and marine borers.

Distribution: The Guianas, Trinidad and the lower Amazon region. Occasional to frequent on Sandy or loamy soils in Guyana.

Preservation: The heartwood is not treatable.

Uses: This is generally a utility timber used for both interior and exterior qualities. Used for furniture, boat planking, tanks and cooperage, joinery, heavy marine construction, turnery, parquet flooring, veneer and plywood.

References

- Chundnoff, Martin (1984), “Tropical Timbers of the World.” USDA Forest Service Ag. Handbook No.607.