



Combretodendron macrocarpum

syn. *C. africanum*

Family: *Lecythidaceae*

Essia

Distribution: Throughout tropical West Africa, fairly common in wet forest areas, infrequent in the dry high forests.

The Tree: Up to 120 ft or more in height; bole straight and cylindrical, sometimes shallowly fluted, 60 to 80 ft long, unbuttressed but flared at the base; trunk diameters 2.5 to 5 ft.

The Wood:

General Characteristics: Heartwood reddish to dark red brown, sometimes with darker streaks; sapwood yellowish white, clearly demarcated. Texture fine to moderately coarse; grain varying from straight to interlocked; when freshly cut, wood has a rotten cabbage odor which disappears on drying.

Weight: Basic specific gravity (ovendry weight/green volume) about 0.70; air-dry density 53 pcf.

Mechanical Properties: (2-cm standard)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
12% (40)	20,300	2,100	10,850
12% (44)	16,600	1,520	8,100
12% (46)	15,400	1,830	7,400

Janka side hardness 2,180 lb for dry material. Amsler toughness 232 to 250 in.-lb. for dry material (2-cm specimen).

Drying and Shrinkage: Dries slowly and is very prone to warping and checking, thick stock liable to collapse and honeycomb. Kiln schedule T2-C2 is suggested for 4/4 stock, very difficult to dry thicker stock. Shrinkage green to ovendry: radial 5.4%; tangential 10.4%; volumetric 14.2%. Movement in service is rated as large.

Working Properties: Rather difficult to work, saws moderately well, dresses to good finish but there is tearing of interlocked grain, may char in boring, has poor steam bending qualities, glues satisfactorily.

Durability: Heartwood is resistant to moderately resistant to attack by decay fungi and termites, sometimes damaged by pinhole borers.

Preservation: Heartwood extremely resistant to preservative treatments: sapwood is permeable.

Uses: Sliced to produce decorative veneers, heavy construction work where end splitting and checking are not objectionable.

Additional Reading: (3), (40), (44), (46)

3. Bolza, E., and W.G. Keating. 1972. African timbers-the properties, used, and characteristics of 700 species. CSIRO. Div. of Build. Res., Melbourne, Australia.

40. Lavers, G.M. 1967. The strength properties of timbers. For. Prod. Res. Bull. No. 50. H.M. Stationery Office. London.

44. Sallenave, P. 1955. Propriétés et mécaniques des bois tropicax de l'union Francaise. Publ. Centre Tech. For. Trop. No. 8.

46. allenave, P. 1964. Propriétés physiques et mécaniques des bois tropicaux. Premier Supplément. Centre Tech. For. Trop. No. 23.

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