technology transfer *fact sheet*
Center for Wood Anatomy Research
USDA Forest Service • Forest Products Laboratory • One Gifford Pinchot Drive • Madison, Wisconsin 53705–2398

Lophira alata
Family: Ochnaceae
Ekki
Azobe

Other Common Names: Bongossi, Bakundu (Cameroon), Kaku (Ghana), Esore (Ivory Coast), Aba (Nigeria), Endwi (Sierra Leone).

Distribution: West Africa and extending into the Congo Basin; occurs in evergreen and moist deciduous forests, in freshwater swamp forests, and close to riverbanks.

The Tree: May attain a height of 160 ft with a long clear bole to 100 ft; trunk diameters 5 to 6 ft; without buttresses but lower portion of the bole sometimes swollen.

The Wood:
General Characteristics: Heartwood dark red, chocolate brown, or purple brown with conspicuous white deposits in the vessels; sapwood up to 2 in. wide, pale pink, well defined. Texture coarse; grain usually interlocked; luster low; without characteristic odor or taste.

Weight: Basic specific gravity (ovendry weight/green volume) about 0.90; air-dry density 70 pcf.

Mechanical Properties: (2-cm standard)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (9)	17,800	2,010	9,920
12%	25,800	2,450	13,120
12% (47)	33,200	3,180	15,200

Janka side hardness 2,900 lb for green material and 3,350 lb for dry. Amsler toughness 625 in.-lb at 12% moisture content (2-cm specimen).

Drying and Shrinkage: Very difficult to season without excessive degrade, particularly surface and end checking; dries slowly. Kiln schedule T2-C2 is suggested for 4/4 stock and T2-C1 for 8/4. Shrinkage green to ovendry: radial 8.4%; tangential 11.0%; volumetric 17.0%. Movement in service is rated as medium.

Working Properties: Very difficult to work with hand and machine tools; severe blunting effect if machined when dry; can be dressed to a smooth finish; gluing properties usually good.

Durability: Heartwood is rated as very durable but only moderately resistant to termite attack. Resistant to acids. Good weathering properties. Resistant to *Teredo* attack.

Preservation: Heartwood is rated as extremely resistant to preservative treatments and the sapwood resistant.

Uses: Heavy durable construction work, harbor work, heavy-duty flooring, parquet flooring, railroad crossties.

Additional Reading: (3), (6), (9), (47).

3. Bolza, E., and W. G. Keating. 1972. African timbers-the properties, uses, and characteristics of 700 species. CSIRO. Div. of Build. Res., Melbourne, Australia.
6. Chalk, L., J. B. Davy, H. E. Desch, and A. C. Hoyle. 1933. Twenty West African timber trees. Clarendon Press. Oxford.
9. Farmer, R. H. 1972. Handbook of hardwoods. H. M. Stationery Office. London.
47.Sallenave, P. 1971. Proprietes physiques et mecaniques des bois tropicaux. Deuxieme Supplement. Centre Tech. For. Trop.

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