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## **Wood Technology Transfer Fact Sheet**

**Khaya ivorensis**

and **K. anthotheca**

**African Mahogany**

**Family:** Meliaceae

**Other Common Names:** Often further classified as to port of shipment or country of origin; consignments to U.S. trade mostly K. ivorensis. Munyama (Uganda), Acajou d'Afrique (Ivory Coast), Dubini, Dukuma fufu (Ghana), Ogwango (Nigeria).

**Distribution:** Sierra Leone and Liberia to Gabon. K. anthotheca then extends eastward to Uganda and inhabits lower rainfall regions than K. ivorensis.

**The Tree:** Reaches heights of 180 to 200 ft; boles are straight, cylindrical, and clear to 90 ft; trunk diameters are 3 to 6 ft, buttressed.

**The Wood:**

**General Characteristics:** Heartwood light pinkish brown darkening upon exposure to reddish brown; sapwood whitish or yellowish, not always sharply demarcated. Texture medium to coarse; grain straight to interlocked, producing a stripe figure; lustrous. Brittleheart present in some logs. Dust from K. anthotheca may be a skin irritant.

**Weight:** Basic specific gravity (ovendry weight/green volume) 0.44; air-dry density 32 pcf.

**Mechanical Properties:** (2-cm standard)

Moisture content Bending strength Modulus of elasticity Maximum crushing strength  
(%) (Psi) (1,000 psi) (Psi)

Green (9) 7,700 1,080 3,680

12% 12,000 1,310 6,430

Green (9) 7,800 1,080 3,890

12% 11,300 1,300 6,730

12% (44) 10,000 NA 6,850

Janka side hardness 640 to 735 lb for green material and 830 to 860 lb for dry. Amsler toughness 178 in.-lb for dry material (2-cm specimen).

**Drying and Shrinkage:** Dries rapidly with little degrade. If tension wood is present, serious distortion may occur during drying. Kiln schedule T6-D4 is suggested for 4/4 stock and T3-03 for 8/4. Shrinkage green to oven-dry: radial 3.2%; tangential 5.6%. Movement in service is rated as small.

**Working Properties:** Rather variable, tends to woolliness and torn grain, sharp thin edge cutters are suggested, a cutting angle of 20 degrees in planing is recommended. Nailing and gluing properties are good, an excellent finish is readily obtainable. Easy to slice and peel.

**Durability:** Heartwood is rated as moderately durable, prone to buprestid and termite attack. Sapwood liable to powder-post beetle attack.

**Preservation:** Heartwood is extremely resistant to preservative treatments; sapwood moderately resistant.

**Uses:** Furniture and cabinetwood, boatbuilding, joinery, veneer and plywood, paneling, shop fixtures.

**Additional Reading:** (3), (9), (44)

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.

9. Farmer, R. H. 1972. Handbook of hardwoods. H. M. Stationery Office. London.

44. Sallenave, P. 1955. Proprietes et mecaniques des bois tropicaux de l'union Francaise. Pub. Centre Tech. For. Trop. No. 8.

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