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Wood Technical Fact Sheet

Pericopsis elata

syn. *Afrormosia elata*

Afrormosia

Family: Leguminosae

Other Common Names: Kokrodua (Ghana), Assamela (Ivory Coast).

Distribution: West Africa, but mainly Ghana and the Ivory Coast, gregarious, grows in both wet and dry areas.

The Tree: May reach a height of 150 ft; bole somewhat irregular, clear to 90 to 100 ft, buttressed to 8 ft and then fluted; trunk diameters 3 to 6 ft.

The Wood:

General Characteristics: Heartwood yellow brown turning to a dark brown on exposure sapwood narrow, lighter in color and clearly demarcated. Texture moderately fine; grain straight to interlocked; some resemblance to teak.

Weight: Basic specific gravity (ovendry weight/green volume) 0.57; air-dry density 43 pcf.

Mechanical Properties: (2-cm standard)

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

Green (9) 15,600 1,650 7,800

12% 19,400 1,810 10,350

12% (47) 11,600 1,370 9,100

Janka side hardness about 1,560 lb for dry material. Amsler toughness 166 in.-lb at 12% moisture content (2-cm specimen).

Drying and Shrinkage: Dries rather slowly with little degrade apart from slight warp. Kiln schedule T10-D5S is suggested for 4/4 stock and T8-D4S for 8/4. Shrinkage green to oven-dry: radial 3.0%; tangential 6.4%; volumetric 10.7%. Movement in service is rated as small.

Working Properties: Works well with hand and machine tools, finishes cleanly, turns satisfactorily, good gluing, moderate steam-bending properties. Sawdust reported to be an eye irritant, good ventilation needed.

Durability: Heartwood is rated as very durable and highly resistant to termite attack. Dark stains liable to appear if in contact with iron under damp conditions.

Preservation: Heartwood extremely resistant to preservative treatments; sapwood fairly permeable.

Uses: Boatbuilding, joinery, flooring, furniture, decorative veneers, considered an excellent teak substitute.

Additional Reading: (3), (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.

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.