



USDA Forest Service
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Wood Technical Fact Sheet

Nauclea diderrichii

syn. Sarcocephalus diderrichii

Opepe

Family: Rubiaceae

Other Common Names: Kusia (Ghana), Badi (Ivory Coast), Bilinga (Gabon), Akondoc (Cameroon), N'Gulu-maza (Zaire), Kilingi (Uganda).

Distribution: Widely distributed from Sierra Leone to the Congo region and eastward to Uganda; often found in pure stands.

The Tree: Up to about 160 ft in height, with straight, cylindrical boles clear to 80 to 100 ft, trunk diameters 3 to 6 ft.

The Wood:

General Characteristics: Heartwood orange or golden yellow, darkening on exposure; sapwood whitish or pale yellow, clearly defined. Texture rather coarse; grain usually interlocked or irregular; lustrous; without characteristic odor or taste. An alkaloid in the wood may be toxic to woodworkers.

Weight: Basic specific gravity (ovendry weight/green volume) 0.63; air-dry density 47 pcf.

Mechanical Properties: (2-cm standard)

Moisture content Bending strength Modulus of elasticity Maximum crushing strength

(%) (Psi) (1,000 psi) (Psi)

Green (9) 13,700 1,720 7,480

12% 17,400 1,940 10,400

12% (46) 15,000 2,000 8,600

Janka side hardness 1,520 lb for green and 1,630 lb for dry material. Amsler toughness 220 in.-lb at 12% moisture content (2-cm specimen).

Drying and Shrinkage: Quartersawn stock dries rather rapidly with little checking or warp; flatsawn lumber may develop considerable degrade. Thin stickers and end-coating is suggested. Kiln schedule T6-D2 is suggested for 4/4 stock and T3-D1 for 8/4. Shrinkage green to oven-dry: radial 4.5%; tangential 8.4%; volumetric 12.6%. Movement in service is rated as small.

Working Properties: Timber works moderately well with hand and machine tools, requires a slow feed in sawing, a 10-degree cutting angle is suggested for planing prevent tearing; good gluing; takes a satisfactory finish. Poor steam-bending characteristics.

Durability: Heartwood is rated as very durable but is moderately resistant to termites. Sapwood liable to powder-post beetle attack. Heartwood resistant to marine borers.

Preservation: Sapwood permeable; heartwood moderately resistant.

Uses: Dock and marine work, boatbuilding (except bent work), railway crossties, general construction, flooring, furniture and cabinet parts.

Additional Reading: (3), (9), (31), (46)