



**USDA Forest Service
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Wood Technology Transfer Fact Sheet

Entandrophragma cylindricum

Sapele

Family: Meliaceae

Other Common Names: Aboudikro (Ivory Coast), Penkwa (Ghana), Muyovu (Uganda), Sapelii (Cameroon), Libuyu (Zaire).

Distribution: Ranging from the Ivory Coast to the Cameroons and eastward through Zaire to Uganda. Occurs in evergreen, deciduous, and transitional forest formation.

The Tree: May reach a height of 150 to 200 ft; bole straight and cylindrical, clear to 100 ft; trunk diameters to 6 ft over broad, low buttresses, sometimes not buttressed.

The Wood:

General Characteristics: Heartwood a medium to fairly dark reddish brown or purplish brown; sapwood whitish or pale yellow, distinct. Texture rather fine; grain interlocked, sometimes wavy, producing a narrow, uniform, roe figure on quartered surfaces; lustrous; without a distinctive taste but with a cedarlike scent.

Weight: Basic specific gravity (ovendry weight/green volume) about 0.55; air-dry density 42 pcf.

Mechanical Properties: (2-cm standard)

Moisture content Bending strength Modulus of elasticity Maximum crushing strength

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

Green (9) 10,700 1,390 5,220

12% 16,100 1,700 5,500

12% (26) 16,500 1,700 8,900

Janka side hardness 1,020 lb for green and 1,500 lb for dry material. Amsler toughness 200 in.-lb for dry material (2-cm specimen).

Drying and Shrinkage: Seasons fairly rapidly but with a marked tendency to warp, very variable in drying properties, requires careful stacking. Kiln schedule T2- D4 is suggested for 4/4 stock and T2-D3 for 8/4. Shrinkage green to oven-dry: radial 4.6%; tangential 7.4%; volumetric 14.0%. Movement in service is rated as medium.

Working Properties: Works fairly well with hand and machine tools, tends to tear interlocked grain in planing, saws easily, finishes well, good gluing and nailing properties, satisfactory peeling and slicing.

Durability: Heartwood is moderately durable, resistance to termite attack variable. Sapwood liable to powder-post beetle attack.

Preservation: Heartwood resistant; sapwood moderately resistant.

Uses: Furniture and cabinetwork, decorative veneers, plywood, joinery, flooring, paneling.

Additional Reading: (3), (9), (26)

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.

26. France: Bois For. Trop. 1974. Sapelli (*Entandrophragma cylindricum*). Bois For. Trop. 154:27-40.

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