



Chlorophora excelsa and C. regia

Family: Moraceae

Iroko

Other Common Names: Semli (Sierra Leone, Liberia), Odoum (Ghana, Ivory Coast), Rokko, Oroko (Nigeria), Abang, Mandji (Cameroon, Gabon), Mereira (Angola), Kambala (Zaire), Mvule (East Africa).

Distribution: The two species, between them, extend across the entire width of tropical Africa. *C. regia* limited to the extreme west of Africa from Gambia to Ghana and is less drought resistant.

The Tree: May reach a height of 160 ft, bole straight, cylindrical and clear to 80 ft, small buttresses sometimes present.

The Wood:

General Characteristics: Heartwood varies from a pale yellowish brown to dark chocolate brown with lighter markings most conspicuous on flat-sawn surfaces; sapwood yellowish white, clearly demarcated. Texture medium to coarse; grain typically interlocked, sometimes irregular; slightly greasy feel; without odor; wet sawdust may cause dermatitis; occasional large "stone" deposits of calcium carbonate.

Weight: Basic specific gravity (ovendry weight/green volume) 0.55; air-dry density about 43 pcf.

Mechanical Properties: (2-cm standard)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (9)	10,700	1,200	5,120
12%	13,100	1,360	7,910
12%(44)	11,200	NA	8,450
12%(44)	13,800	NA	7,150

Janka side hardness 1,080 lb for green and 1,260 lb for dry material. Amsler toughness 166 to 248 in.-lb for dry material (2-cm specimen).

Drying and Shrinkage: Dries rapidly with little or no degrade. Kiln schedule T6-D2 is suggested for 4/4 stock and T3-D1 for 8/4. Shrinkage green to ovendry: radial 2.8%; tangential 3.8%; volumetric 8.8%. Movement in service is rated as small.

Working Properties: Works fairly easily with hand or machine tools but with some tearing of interlocked grain; occasional deposits of calcium carbonate severely damage cutting edges; good

nailing and gluing characteristics; moderate steam-bending properties; may cause dermatitis in working wet wood.

Durability: Heartwood is very durable and is resistant to termite and marine borer attack as well. Sapwood liable to powder-post beetle attack.

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

Uses: Suggested as a teak substitute. Joinery, boatbuilding, piling and marine work, domestic flooring, furniture, veneer, railroad crossties, cabinetwork, shop fittings.

Additional Reading: (3), (8), (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.

8. Eggeling, W.J., and C.M. Harris. 1939. Fifteen Uganda timbers. Clarendon Press. Oxford.

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

44. Salenave, P. 1955. Propriétés et mécaniques des bois tropicaux de l'union Française. Publ. Centre Tech. For. Trop. No.8.

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