Wood Technical Fact Sheet

*Lophira alata*

Ekki

Azobe

Family: Ochnaceae

**Other Common Names:** Bongossi, Bakundu (Cameroon), Kaku (Ghana), Esore (Ivory Coast), Aba (Nigeria), Endwi (Sierra Leone).

**Distribution:** West Africa and extending into the Congo Basin; occurs in evergreen and moist deciduous forests, in freshwater swamp forests, and close to riverbanks.

**The Tree:** May attain a height of 160 ft with a long clear bole to 100 ft; trunk diameters 5 to 6 ft; without buttresses but lower portion of the bole sometimes swollen.

**The Wood:**

**General Characteristics:** Heartwood dark red, chocolate brown, or purple brown with conspicuous white deposits in the vessels; sapwood up to 2 in. wide, pale pink, well defined. Texture coarse; grain usually interlocked; luster low; without characteristic odor or taste.

**Weight:** Basic specific gravity (ovendry weight/green volume) about 0.90; air-dry density 70 pc f.

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

Moisture content Bending strength Modulus of elasticity Maximum crushing strength

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<th>(%)</th>
<th>(Psi)</th>
<th>(1,000 psi)</th>
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<tr>
<td>Green (9)</td>
<td>17,800</td>
<td>2,010</td>
<td>9,920</td>
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<tr>
<td>12%</td>
<td>25,800</td>
<td>2,450</td>
<td>13,120</td>
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<td>12% (47)</td>
<td>33,200</td>
<td>3,180</td>
<td>15,200</td>
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Janka side hardness 2,900 lb for green material and 3,350 lb for dry. Amsler toughness 625 in.-lb at 12% moisture content (2-cm specimen).

**Drying and Shrinkage:** Very difficult to season without excessive degrade, particularly surface and end checking; dries slowly. Kiln schedule T2-C2 is suggested for 4/4 stock and T2-C1 for 8/4. Shrinkage green to ovendry: radial 8.4%; tangential 11.0%; volumetric 17.0%. Movement in service is rated as medium.

**Working Properties:** Very difficult to work with hand and machine tools; severe blunting effect if machined when dry; can be dressed to a smooth finish; gluing properties usually good.

**Durability:** Heartwood is rated as very durable but only moderately resistant to termite attack. Resistant to acids. Good weathering properties. Resistant to Teredo attack.

**Preservation:** Heartwood is rated as extremely resistant to preservative treatments and the sapwood resistant.

**Uses:** Heavy durable construction work, harbor work, heavy-duty flooring, parquet flooring, railroad crossties.

**Additional Reading:** (3), (6), (9), (47).


