|  |  |  |
| --- | --- | --- |
| **[Scientific Name](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**Khaya ivorensis**[Trade Name](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**African mahogany **[Family Name](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**Meliaceae |

|  |
| --- |
|  |

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**[Common Names](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Acajou bassam, Acajou blanc, Acajou d'Afrique, Acajou rouge, African mahogany, Akuk, Bandoro, Bariba, Benin mahogany, Biribi, Biribu, Bisselon, Bitehi, Diala iri, Diburi, Dubini, Dukuma, Dukuma fufu, Dukuma-dugura, Dukumakokre, Dupuin, Ekuie, Eri Kiree, Houngo, Humpe, Khaya, Khaya mahogany, Kortghot, Krala, Krubna, Lokobua, Lukuma, Munyama, Ngollo, Ngollon, Oduben, Odupod, Odupon, Ogurango, Ogurano, Ogwango, Orkogho, Red mahogany, Samanguila, Senegal mahogany, Tiamatiama, Zoele

**[Regions of Distribution](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Africa

**[Countries of Distribution](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)** **[**[**VIEW MAP**](http://www.thewoodexplorer.com/onlinedbf/maindata/mapdata/mapdata678.html)**]**
Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Togo, Uganda

**[Common Uses](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Boat building (general), Boat building, Boat building: decking, Boat building: planking, Cabinetmaking, Carvings, Decorative veneer, Flooring, Furniture , Furniture, Heavy construction, Interior construction, Joinery, Light construction, Millwork, Musical instruments, Paneling , Paneling, Plywood, Sporting Goods, Tables, Tool handles, Turnery, Vehicle parts, Veneer, Veneer: decorative

**[Environmental Profile](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown because of lack of information |  |  |  |  |  |  |  |  |  |  |  |  |
| Data source is World Conservation Monitoring Center |  |  |  |  |  |  |  |  |  |  |  |  |

**[Distribution Overview](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Occurs in Angola, Cameroon, Congo, C�te d'Ivoire, Gabon, Ghana, Liberia, Sierra Leone, Nigeria and Zaire. In Ghana, this species occurs in many habitat types but seems to thrive best in moist and wet undisturbed evergreen forest. It is found scattered across almost the whole of Congo and is occasionally quite abundant.

**[Heartwood Color](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Red |  |  |  |  |  |  |  |  |  |  |  |  |
| Yellow |  |  |  |  |  |  |  |  |  |  |  |  |
| Purple |  |  |  |  |  |  |  |  |  |  |  |  |
| Brown |  |  |  |  |  |  |  |  |  |  |  |  |
| Green/grey |  |  |  |  |  |  |  |  |  |  |  |  |
| Pink |  |  |  |  |  |  |  |  |  |  |  |  |
| Orange |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pale red to pink* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Reddish brown* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Dark brown* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Red* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pale brown* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Brown* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Turn reddish brown upon exposure* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pink-Brown* |  |  |  |  |  |  |  |  |  |  |  |  |

The yellowish-brown color that is present in the paler shades of American mahoganies is very rare.

**[Sapwood Color](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| White |  |  |  |  |  |  |  |  |  |  |  |  |
| Yellow |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *White to yellow* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Paler than heartwood* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Well defined* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pinkish* |  |  |  |  |  |  |  |  |  |  |  |  |

Creamy-White or yellowish
Not always distinct from the heartwood. It is usually about 2 inches (5 cm) wide.

**[Grain](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Figure |  |  |  |  |  |  |  |  |  |  |  |  |
| Distinct (figure) |  |  |  |  |  |  |  |  |  |  |  |  |
| Interlocked |  |  |  |  |  |  |  |  |  |  |  |  |
| Straight |  |  |  |  |  |  |  |  |  |  |  |  |
| Stripe (figure) |  |  |  |  |  |  |  |  |  |  |  |  |
| Very fine |  |  |  |  |  |  |  |  |  |  |  |  |
| Closed |  |  |  |  |  |  |  |  |  |  |  |  |
| Even |  |  |  |  |  |  |  |  |  |  |  |  |
| Growth rings (figure) |  |  |  |  |  |  |  |  |  |  |  |  |
| Rays (figure) |  |  |  |  |  |  |  |  |  |  |  |  |
| Rippled (figure) |  |  |  |  |  |  |  |  |  |  |  |  |
| Roey (figure) |  |  |  |  |  |  |  |  |  |  |  |  |
| Wavy |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Interlocked |  |  |  |  |  |  |  |  |  |  |  |  |
| Distinct figure |  |  |  |  |  |  |  |  |  |  |  |  |
| Straight |  |  |  |  |  |  |  |  |  |  |  |  |
| Striped figure |  |  |  |  |  |  |  |  |  |  |  |  |
| Figure occurrence is very fine and distinct |  |  |  |  |  |  |  |  |  |  |  |  |
| Wavy |  |  |  |  |  |  |  |  |  |  |  |  |
| Roey figure |  |  |  |  |  |  |  |  |  |  |  |  |
| Rippled figure |  |  |  |  |  |  |  |  |  |  |  |  |
| Rays figure |  |  |  |  |  |  |  |  |  |  |  |  |
| Clear growth rings (figure) |  |  |  |  |  |  |  |  |  |  |  |  |

Swirl and crotch figures are also common.

**[Texture](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Medium |  |  |  |  |  |  |  |  |  |  |  |  |
| Coarse |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Medium coarse to coarse* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Coarse* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Fine* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Variable* |  |  |  |  |  |  |  |  |  |  |  |  |

**[Luster](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Medium |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Lustrous* |  |  |  |  |  |  |  |  |  |  |  |  |
| *High* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Golden luster* |  |  |  |  |  |  |  |  |  |  |  |  |

**[Natural Growth Defects](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gum and mineral deposits |  |  |  |  |  |  |  |  |  |  |  |  |
| Brittleheart is often frequent and extensive |  |  |  |  |  |  |  |  |  |  |  |  |

**[Natural Durability](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Durable |  |  |  |  |  |  |  |  |  |  |  |  |
| Perishable |  |  |  |  |  |  |  |  |  |  |  |  |
| Non-durable |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Moderately durable* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Susceptible to attack from powder post (Lyctid & Bostrychid) beetles* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Susceptible to attack from termites (Isoptera)* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pinworms (ambrosia beetles) often present in the standing tree* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pinworms (ambrosia beetles) may be present in the felled log* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Susceptible to marine borer attack* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Resistant to wood staining fungal attack* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Non durable* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Sapwood susceptible to attack by powder post beetles* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Sapwood is vulnerable to attack by furniture beetles* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Resistant to attack from powder post (Lyctid & Bostrychid) beetles* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Pinworms (ambrosia beetles) are commonly present* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Heartwood moderately resistant to decay* |  |  |  |  |  |  |  |  |  |  |  |  |

Resistant to termite attack in West Africa
Trees and logs are vulnerable to attack by forest longhorn and Buprestid beetles.

**[Odor](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No specific smell or taste |  |  |  |  |  |  |  |  |  |  |  |  |

**[Light-Induced Color Change](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Darker |  |  |  |  |  |  |  |  |  |  |  |  |

**[Toxicity](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Dermatitic effects |  |  |  |  |  |  |  |  |  |  |  |  |
| Unspecified toxicity |  |  |  |  |  |  |  |  |  |  |  |  |
| Non-toxic |  |  |  |  |  |  |  |  |  |  |  |  |

**[Kiln Schedules](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Drying (speed) is fast |  |  |  |  |  |  |  |  |  |  |  |  |
| Kiln Drying Rate (in days) is fairly rapid |  |  |  |  |  |  |  |  |  |  |  |  |

**[Drying Defects](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Splitting |  |  |  |  |  |  |  |  |  |  |  |  |
| Distortion |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Slight twist/warp* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Slight end splitting* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Slight surface checking* |  |  |  |  |  |  |  |  |  |  |  |  |
| *No surface checking* |  |  |  |  |  |  |  |  |  |  |  |  |
| *No end splitting* |  |  |  |  |  |  |  |  |  |  |  |  |
| *No twisting or warping* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Moderate twist/warp* |  |  |  |  |  |  |  |  |  |  |  |  |

Radial - 2.5%
Shrinkage from Green to 12% MC
Strongly developed tension wood may cause excessive distortion during drying.
Tangential - 4.5%

**[Ease of Drying](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Easy |  |  |  |  |  |  |  |  |  |  |  |  |
| Variable results. |  |  |  |  |  |  |  |  |  |  |  |  |

The timber dries at a fairly rapid rate with little degrade, except when tension wood is present

**[Kiln Drying Rate](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fairly rapid (11-17 days for boards under 32 mm, to 31-51 days for boards greater than 63 mm) |  |  |  |  |  |  |  |  |  |  |  |  |

**[Tree Identification](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bole/stem form is buttressed |  |  |  |  |  |  |  |  |  |  |  |  |
| Bole/stem form is straight |  |  |  |  |  |  |  |  |  |  |  |  |
| Bole/stem form is cylindrical |  |  |  |  |  |  |  |  |  |  |  |  |

**[Tree Size](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bole length is 0-10 m |  |  |  |  |  |  |  |  |  |  |  |  |
| Bole length is 10-20 m |  |  |  |  |  |  |  |  |  |  |  |  |
| Tree height is 30-40 m |  |  |  |  |  |  |  |  |  |  |  |  |

Develops straight, well-formed boles that measure about 40 to 80 feet (12 to 24 m) above strong buttresses that are up to 8 feet (2.5 m) high

**[Product Sources](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Although the species makes up most of the African mahogany on the international market, it is usually sold in a mixture with other Khaya species including K. anthotheca , K. grandifoliola , and K. senegalensis . Origin of consignment can sometimes help identify specific Khaya species. This may be valuable since differences in some properties can be appreciable. Supplies in the lumber form are quite abundant, and can be found in a wide range of sizes at moderate prices. They are also available in plywood form from many lumber suppliers. African mahogany is frequently used to replace American mahogany because it is cheaper and more abundant, and can also be used for the same applications.

**[Substitutes](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Crabwood (Carapa guianensis) is similar in appearance and is nearly as tough. Sapele (Entandrophragma cylindricum) has superiod strength properties. African canarium (Canarium schweinfurthii) is extremely similar in appearance once it is stained.

**[Comments](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
General finishing qualities are rated as good

Some logs may have brittleheart which can cause thundershakes, or cross-breaks, or heart-breaks. The defect is more common in figured logs.

Tension Wood - Abnormal wood tissue in the form of tension wood and brittleheart is sometimes present.

**[Blunting Effect](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Blunting effect on machining is slight |  |  |  |  |  |  |  |  |  |  |  |  |
| Blunting effect on machining is moderate |  |  |  |  |  |  |  |  |  |  |  |  |
| Moderate effect |  |  |  |  |  |  |  |  |  |  |  |  |
| Blunting effect on sawing dry wood is moderate |  |  |  |  |  |  |  |  |  |  |  |  |

**[Cutting Resistance](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Easy to saw |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Cutting Resistance with dry wood is easy* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Cutting Resistance with dry wood is difficult* |  |  |  |  |  |  |  |  |  |  |  |  |

Cross-Cutting and narrow bandsawing are satisfactory

**[Gluing](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Easy to glue |  |  |  |  |  |  |  |  |  |  |  |  |
| Satisfactory gluing properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Moderate gluing properties |  |  |  |  |  |  |  |  |  |  |  |  |

**[Mortising](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Difficult to mortise |  |  |  |  |  |  |  |  |  |  |  |  |

**[Moulding](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Difficult to mould |  |  |  |  |  |  |  |  |  |  |  |  |

Square block is reported to cause the most tearing and French head is not recommended for woolly stock.

**[Movement in Service](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Small |  |  |  |  |  |  |  |  |  |  |  |  |
| Shows only small movement after manufacture |  |  |  |  |  |  |  |  |  |  |  |  |
| Retains shape well after seasoning |  |  |  |  |  |  |  |  |  |  |  |  |

**[Nailing](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Easy to nail |  |  |  |  |  |  |  |  |  |  |  |  |
| Satisfactory nailing properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Possible if prebored |  |  |  |  |  |  |  |  |  |  |  |  |
| Holds nails well |  |  |  |  |  |  |  |  |  |  |  |  |

Non-Ferrous or coated fastenings have been recommended to prevent dark stains on the wood since it reacts with iron under damp conditions.

**[Planing](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Poor to Very Poor Results |  |  |  |  |  |  |  |  |  |  |  |  |

Machining properties are affected by interlocked grain and by the woolly nature of the stock being worked. A reduced cutting angle of 20 degrees has been recommended in planing to prevent grain from tearing.

**[Resistance to Impregnation](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Heartwood is highly resistant |  |  |  |  |  |  |  |  |  |  |  |  |
| Sapwood is moderately resistant |  |  |  |  |  |  |  |  |  |  |  |  |

**[Response to Hand Tools](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fairly Difficult to Difficult to Work |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Easy to machine* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Variable qualities* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Moderate working qualities* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Difficult to machine* |  |  |  |  |  |  |  |  |  |  |  |  |

Heavily interlocked material is difficult to surface without tearing

**[Screwing](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Easy to screw |  |  |  |  |  |  |  |  |  |  |  |  |
| Screwing yields good results |  |  |  |  |  |  |  |  |  |  |  |  |
| Possible if prebored |  |  |  |  |  |  |  |  |  |  |  |  |

**[Turning](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**
Turning and other woodworking operations such as mortising, boring, and sanding are all satisfactory, except in woolly material

**[Veneering Qualities](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No drying degrade. Dries flat without splitting |  |  |  |  |  |  |  |  |  |  |  |  |
| Easy to cut |  |  |  |  |  |  |  |  |  |  |  |  |

**[Steam Bending](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Very poor |  |  |  |  |  |  |  |  |  |  |  |  |

The wood is not recommended for steam bending applications since it buckles severely. A supporting strap is reported to give no advantage.

**[Polishing](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Very Good to Excellent Results |  |  |  |  |  |  |  |  |  |  |  |  |
| Fair to Good Results |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Satisfactory results* |  |  |  |  |  |  |  |  |  |  |  |  |
| *Good results* |  |  |  |  |  |  |  |  |  |  |  |  |

**[Staining](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Finish is generally satisfactory |  |  |  |  |  |  |  |  |  |  |  |  |
| Finish is generally good |  |  |  |  |  |  |  |  |  |  |  |  |
| Good staining properties |  |  |  |  |  |  |  |  |  |  |  |  |

**[Strength Properties](http://www.thewoodexplorer.com/onlinedbf/maindata/we678.html%22%20%5Cl%20%22Scientific_Name)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Density (dry weight) = 31-37 lbs/cu. ft. |  |  |  |  |  |  |  |  |  |  |  |  |
| Max. crushing strength = medium |  |  |  |  |  |  |  |  |  |  |  |  |
| Bending strength (MOR) = low |  |  |  |  |  |  |  |  |  |  |  |  |
| Hardness (side grain) = soft |  |  |  |  |  |  |  |  |  |  |  |  |
| Modulus of Elasticity (stiffness) = very low |  |  |  |  |  |  |  |  |  |  |  |  |
| Bending strength (MOR) = medium |  |  |  |  |  |  |  |  |  |  |  |  |
| Shearing strength (parallel to grain) = low |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Radial = small |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Tangential = small |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Tangential = very small |  |  |  |  |  |  |  |  |  |  |  |  |
| Modulus of Elasticity (stiffness) = low |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Volumetric = small |  |  |  |  |  |  |  |  |  |  |  |  |
| Hardness (side grain) = very soft |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Volumetric = moderate |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Radial = very small |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Radial = moderate |  |  |  |  |  |  |  |  |  |  |  |  |
| Density (dry weight) = 23-30 lbs/cu. ft. |  |  |  |  |  |  |  |  |  |  |  |  |
| Toughness-Hammer drop (Impact Strength) = very low |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Tangential = moderate |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Tangential = fairly large |  |  |  |  |  |  |  |  |  |  |  |  |
| Work to Maximum Load = very low |  |  |  |  |  |  |  |  |  |  |  |  |
| Toughness-Hammer drop (Impact Strength) = low |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Volumetric = fairly large |  |  |  |  |  |  |  |  |  |  |  |  |
| Shearing strength (parallel to grain) = very low |  |  |  |  |  |  |  |  |  |  |  |  |
| Shearing strength (parallel to grain) = medium |  |  |  |  |  |  |  |  |  |  |  |  |
| Max. crushing strength = low |  |  |  |  |  |  |  |  |  |  |  |  |
| Density (dry weight) = 38-45 lbs/cu. ft. |  |  |  |  |  |  |  |  |  |  |  |  |
| Shrinkage, Volumetric = large |  |  |  |  |  |  |  |  |  |  |  |  |
| Modulus of Elasticity (stiffness) = medium |  |  |  |  |  |  |  |  |  |  |  |  |
| Density = high |  |  |  |  |  |  |  |  |  |  |  |  |
| Crushing strength = medium |  |  |  |  |  |  |  |  |  |  |  |  |

Moderate properties in hardness and weight
Strength properties of K. ivorensis are halfway between those of Obeche (Triplochiton scleroxylon ) and European beech (Fagus sylvatica ).

**Numerical Data**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Green | Dry | English |
|  |  |  |  |
| Bending Strength | 7464 | 11257 | psi |
| Density |  | 32 | lbs/ft3 |
| Hardness |  | 826 | lbs |
| Impact Strength | 25 | 21 | inches |
| Maximum Crushing Strength | 3786 | 6384 | psi |
| Shearing Strength |  | 1546 | psi |
| Stiffness | 1169 | 1386 | 1000 psi |
| Work to Maximum Load | 6 | 7 | inch-lbs/in3 |
| Specific Gravity | 0.4 |  |  |
| Weight | 31 | 31 | lbs/ft3 |
| Radial Shrinkage | 3 |  | % |
| Tangential Shrinkage | 5 |  | % |
| Volumetric Shrinkage | 10 |  | % |
|  |  |  |  |
| Item | Green | Dry | Metric |
|  |  |  |  |
| Bending Strength | 524 | 791 | kg/cm2 |
| Density |  | 512 | kg/m3 |
| Hardness |  | 374 | kg |
| Impact Strength | 63 | 53 | cm |
| Maximum Crushing Strength | 266 | 448 | kg/cm2 |
| Shearing Strength |  | 108 | kg/cm2 |
| Stiffness | 82 | 97 | 1000 kg/cm2 |
| Work to Maximum Load | 0.42 | 0.49 | cm-kg/cm3 |
| Specific Gravity | 0.4 |  |  |
| Weight | 496 | 496 | kg/m3 |
| Radial Shrinkage | 3 |  | % |
| Tangential Shrinkage | 5 |  | % |

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