



**Borneo Ironwood (Eusideroxylon Zwageri)**

<b>Botanical Name:</b>	Eusideroxylon zwageri
<b>Other Common Names:</b>	Belian, Borneo ironwood, Onglen, Tambulian, Ulin
<b>Common Uses:</b>	Heavy construction, Boat building, Piling, Factory flooring, Shingles, Tool handles, Furniture , Building construction, Building materials, Cabin construction, Canoes, Chairs, Chests, Concealed parts (Furniture), Construction, Desks, Dining-room furniture, Dowell pins, Dowells, Drawer sides, Exterior trim & siding, Exterior uses, Factory construction, Fine furniture, Floor lamps, Flooring, Furniture components, Furniture squares or stock, Handles, Hatracks, Kitchen cabinets, Lifeboats, Living-room suites, Mine timbers, Office furniture, Pile-driver cushions, Radio, stereo, TV cabinets, Rustic furniture, Shafts/Handles, Shipbuilding, Stools, Sub-flooring, Tables , Utility furniture, Wardrobes
<b>Region:</b>	Oceania and S.E. Asia
<b>Country:</b>	Indonesia, Malaysia, Philippines

**Numerical Values for: Eusideroxylon zwageri**

<u>Category</u>	<u>Green</u>	<u>Dry</u>	<u>Unit</u>
Bending Strength	19654	24520	psi
Max. Crushing Strength	11348	13075	psi
Stiffness	2688	2835	1000 psi
Hardness		3020	lbs
Shearing Strength		2711	psi
Specific Gravity	0.89		
Weight		70	lbs/cu.ft.
Density (Air-dry)		69	lbs/cu.ft.
Radial Shrinkage (G->OD)		4	%
Tangential Shrink. (G->OD)		8	%

**Tree & Wood Descriptions for: *Eusideroxylon zwageri***

Product Sources	It is not known at present whether timber from this species is obtainable from sustainably managed or other environmentally responsible sources.
Tree Data	The tree is reported to attain heights of up to 100 feet (30 m), with trunk diameters of 32 to 40 inches (80 to 100 cm).
Sapwood Color	The freshly-cut sapwood is bright-yellow in color but it darkens upon exposure. It is well demarcated from the heartwood.
Heartwood Color	The heartwood is initially light brown to almost bright yellow. Upon exposure it matures into deep reddish brown, very dark brown, or almost black.
Grain	The grain is commonly straight, occasionally slightly interlocked. The wood is reported to be typically unfigured.
Texture	The texture is fine and even.
Luster	The surface of the wood is described as somewhat lustrous.
Odor	There is no distinctive taste but a lemon-like scent is reported to be persistent even in seasoned material.
Natural Durability	<p>The heartwood is reported to have exceptional natural durability and can last for 50 to 100 years in ground contact. It is immune to termites but it susceptible to attack by marine borers.</p> <p>Resistance to Impregnation The heartwood is reported to be untreatable, but the seasoned sapwood is permeable.</p>
Oil Cells	The wood contains oil cells.

### **Working Properties for: *Eusideroxylon zwageri***

Blunting Effect	Dulling effect on tool edges is reported to be only moderate.
Cutting Resistance	The timber is reported to saw rather easily but saw teeth tend dull rapidly and become accumulated with oil deposits.
Planing	The timber is described as hard and heavy, but it is reported that it responds readily to planing.
Turning	The timber is reported to turn rather well for average jobs, but it is not suitable for artistic turneries since it tends to chip.
Moulding	The wood responds well to moulding operations.
Boring	The timber is described as very hard and heavy, but it is reported to bore cleanly at slow speeds.
Routing & Recessing	Routing and recessing characteristics are rated as good.
Mortising	Mortising properties are reported to be rather good although the material is hard and heavy.
Carving	Although the wood is heavy and hard, it is reported to respond well to carving.
Gluing	The material is reported to respond poorly to synthetic resin glues.
Nailing	The timber is reported to be rather difficult to nail because it is very hard and heavy. Pre-boring is recommended.
Sanding	Sanding properties are reported to be good.
Polishing	The wood is reported to polish smoothly, with some care.
Staining	The wood is reported to stain rather well and evenly.
Painting	

Painting characteristics are reported to be good.

Response to Hand Tools

Response to hand tools is reported to be generally good.

## Drying for: *Eusideroxylon zwageri*

Ease of Drying	Drying properties are reported to vary with origin of the timber, but it generally seasons easily with little degrade.
Drying Defects	The wood may warp and check slightly during drying.
Kiln Schedules	T2 - C2 (4/4); T2 - C1 (8/4) US
T/R Ratio	1.74  This indicator is more meaningful if it is used together with other drying information and actual shrinkage data in the tangential and radial directions. (Refer to the Numerical Values window).

*Credits for information:*  
*Woodworkersource.com*