



Ramin (*Gonystylus Bancanus*)

Botanical Name:	Gonystylus bancanus
Other Common Names:	Melawis, Ramin, Ramin melawis
Common Uses:	Furniture , Joinery, Moldings, Paneling , Flooring, Turnery, Office furniture, Handles, Dowell pins, Picture frames, Broom handles, Building materials, Cabinetmaking, Chairs, Chests, Concealed parts (Furniture), Desks, Dining-room furniture, Domestic flooring, Dowells, Drawer sides, Excelsior, Factory flooring, Fine furniture, Floor lamps, Furniture components, Furniture squares or stock, Hatracks, Interior construction, Interior trim, Kitchen cabinets, Living-room suites, Parquet flooring, Radio, stereo, TV cabinets, Rustic furniture, Shafts/Handles, Stools, Sub-flooring, Tables , Tool handles, Utility furniture, Wainscoting, Wardrobes
Region:	Oceania and S.E. Asia
Country:	Malaysia, Philippines
Distribution:	The species is reported to grow in the peat swamps of Malaysia, eastward through some of the islands of Indonesia and the west coast of Borneo, and northward into the Philippines. Ramin prefers wet soils, and usually grows along rivers and in dense, swampy forests.

Numerical Values for: *Gonystylus bancanus*

<u>Category</u>	<u>Green</u>	<u>Dry</u>	<u>Unit</u>
Bending Strength	9410	18500	psi
Max. Crushing Strength	5319	9575	psi
Static Bending (FSPL)	4836		psi
Impact Strength	26	34	inches
Stiffness	1631	2100	1000 psi
Work to Maximum Load	9	17	in-lbs/in ³

Hardness		1300	lbs
Shearing Strength		1514	psi
Toughness		193	in-lbs
Specific Gravity	0.54	0.65	
Weight	50	40	lbs/cu.ft.
Density (Air-dry)		41	lbs/cu.ft.
Radial Shrinkage (G->OD)		4	%
Tangential Shrink. (G->OD)		9	%
Volumetric Shrink. (G->OD)		13	%

Tree & Wood Descriptions for: *Gonystylus bancanus*

Product Sources	<p>It is not known at present whether timber from this species is obtainable from sustainably managed or other environmentally responsible sources.</p> <p>This general purpose, utility timber for interior applications is reported to be abundant within most of its native range. Shipping costs and the fact that Ramin is used for the same applications as many North American hardwoods such as, Maple are reported to make it less appealing. Ramin is therefore reported to be seldom available on the North American market in lumber form. It is often found both on the US and European markets preprocessed into materials such as plywood corestock, dowels and moldings.</p>
Tree Data	Ramin is reported to produce tall trees that are sometimes fluted at the base and boles that are cylindrical, straight and clear from branches for 50 to 60 feet (15 to 18 m). Trunk diameters is usually about 24 inches (60 cm), but can be as high as 42 inches (110 cm).
Heartwood Color	The sapwood and heartwood are both pale-straw or creamy white in color. There is no clear demarcation between the two.
Grain	The grain is usually straight or shallowly interlocked. The wood is reported to be typically without any outstanding features.
Texture	Texture is described as generally fine. The wood usually has several, widely spaced large vessels which appear as fine brown lines on the surface, and impart a subtly attractive figure.
Luster	Although the wood has a low surface luster, the wavy grain sometimes refracts light to give the wood a rich, transluscent quality.
Odor	Green or wet wood may have a strong unpleasant odor, which has been described

	as musty. The odor, which is reported to be similar to that from freshly-cut elm, disappears after the wood is seasoned but may reappear if the material is rewetted. There is no distinct taste.
Mineral Deposits	Crystals are reported to be usually abundant.
Movement in Service	The timber is reported to have poor dimensional stability, and tends to move considerably in use.
Natural Durability	<p>The heartwood is reported to have very low natural resistance to decay, and should not be used in exterior applications without treatment. Logs should be extracted from the forest rapidly after felling since they are prone to blue stain and pinhole borer attack. Sapwood is vulnerable to attack by powder-post beetle, and the heartwood is susceptible to marine borer and termite attack. Keeping logs saturated in storage ponds prior to milling has been suggested.</p> <p>Resistance to Impregnation Both heartwood and sapwood are reported to be easily treated with preservatives.</p>
Toxic Constituents	Skin irritation has been reported in some individuals handling logs. The irritation is believed to be caused by skin penetration by long pointed bark fibers on logs. Washing with soap and water is reported to be an effective remedy.
Reaction Wood	Bands of tension wood may be present in the timber.

Working Properties for: *Gonystylus bancanus*

Blunting Effect	The wood exerts moderate blunting effect on cutters.
Cutting Resistance	The timber is reported to have satisfactory sawing properties.
Planing	The timber generally planes well but a reduced planing angle of 20 degrees has been recommended to prevent tearing since the most attractive Ramin products are from logs containing wavy grain. Level of difficulty is reported to be no higher than in Curly maple.
Turning	Turning qualities are rated as good. Ramin is vulnerable to attack by fungi, which produces attractively spalted material for turnery work.
Moulding	The wood is reported to mould well, but adequate support is usually required at

	tool exits.
Boring	Straight fluted drills are recommended for boring.
Routing & Recessing	Routing qualities are generally good, but material should be supported at tool exits to prevent break-out.
Mortising	Mortising characteristics are reported to be generally good.
Carving	The timber is reported to be rather easy to carve.
Gluing	The wood is reported to glue well, and is similar to Hard maple in gluing characteristics.
Nailing	The material has a marked tendency to split in nailing.
Sanding	The wood can be sanded easily.
Polishing	Polishing characteristics are reported to be very good.
Staining	The material takes stain satisfactorily after slight treatment with a filler.
Varnishing	The wood can be varnished satisfactorily after pre-treatment.
Steam Bending	The timber is reported to have poor steam bending properties.

Drying for: *Gonystylus bancanus*

Ease of Drying	The timber dries readily with little degrade, turning almost white upon drying. Thicker stock is usually more difficult to dry, and the wood may give off a strong, unpleasant odor during drying. The timber is reported to turn almost white after seasoning.
Drying Defects	Thicker stock is especially prone to surface-checking and end-splitting during

drying. Volumetric shrinkage is reported to be in the moderate range.

Kiln Schedules

T3 - C2 (4/4); T2 - C1 (8/4) US

Schedule C - United Kingdom

Maintaining a relative humidity 10% higher than that suggested in the Schedule is recommended during the initial stages of drying 1.5 inch (30 mm) thick stock. In certain cases, a high temperature, high humidity treatment may be necessary to prevent discoloration from mold growth.

*Credits for information:
Woodworkersource.com*