

WOOD PROPERTIES

Species	Origin	Hardness	Strength	Weight (lb/bf)	Hand Tools	Power Tools	Gluing	Finishing	Comments
<i>Domestic Hardwoods</i>									
Alder, Red	Western North America	Very Soft	Weak	2.14	Difficult	Difficult	Good	Good	Grain tears easily. Blends with walnut, cherry and mahogany when stained.
Ash	North America	Hard	Strong	3.13	Very Easy	Easy	Excellent	Excellent	Easy to bend. Resists shock loads.
Aspen	North America	Very Soft	Very Weak	1.98	Very Easy	Easy	Good	Poor	Almost indistinguishable from Cottonwood.
Basswood	Eastern North America	Very Soft	Weak	1.93	Very Easy	Easy	Excellent	Excellent	Preferred by many woodcarvers.
Beech	Eastern North America	Hard	Strong	3.34	Easy	Easy	Excellent	Excellent	Easy to bend. Sometimes substituted for hard maple.
Birch, Yellow	Eastern North America	Hard	Very Strong	3.23	Easy	Moderate	Good	Excellent	Easy to bend. Sometimes substituted for hard maple. Prone to warping and twisting.
Butternut	Northeastern North America	Very Soft	Weak	1.98	Very Easy	Very Easy	Excellent	Excellent	Sometimes referred to as white walnut.
Cherry	Eastern North America	Medium	Medium	2.61	Very Easy	Easy	Excellent	Excellent	Premium furniture wood.
Chestnut, Wormy	Southeastern North America	Very Soft	Weak	2.24	Very Easy	Very Easy	Excellent	Excellent	Most living trees destroyed by fungus in early 20th century. New lumber is salvaged from dead trees.
Elm, Red	Eastern North America	Soft	Medium	2.61	Difficult	Difficult	Adequate	Adequate	Fairly easy to bend. Has an outstanding resistance to shock loads.
Gum, Red	Southeastern North America	Medium	Strong	2.71	Difficult	Easy	Excellent	Excellent	Also known as Sweet Gum.
Hickory	Eastern North America	Very Hard	Very Strong	3.75	Very Difficult	Difficult	Excellent	Excellent	Fairly easy to bend.
Holly	Southeastern North America	Hard	Strong	2.61	Very Easy	Very Easy	Excellent	Excellent	One of the few evergreen dicots - doesn't lose its leaves seasonally.
Maple, Hard	Eastern North America	Hard	Very Strong	3.28	Difficult	Easy	Adequate	Excellent	Premium furniture wood, curly figure and bird's-eye figure common. Easy to bend.
Maple, Soft	Eastern North America	Medium	Strong	2.81	Difficult	Easy	Good	Excellent	Utility furniture wood.
Oak, Red	North America	Very Hard	Strong	3.28	Easy	Easy	Good	Excellent	Sawdust is potential irritant.
Oak, White	North America	Very Hard	Very Strong	3.54	Easy	Easy	Good	Good	Similar to red oak in most respects, but has finer texture and darker color. Potential irritant.
Osage Orange	North America	Very Hard	Strong	4.01	Difficult	Moderate	Adequate	Good	Resists decay. Source of yellow, tan, and khaki dyes. Potential irritant.
Poplar, Yellow	Eastern North America	Soft	Medium	2.19	Very Easy	Very Easy	Excellent	Good	Although not considered a premium wood, it's very versatile - not much it can't be used for.
Sassafras	Eastern North America	Soft	Weak	2.40	Easy	Very Easy	Excellent	Good	Sawdust is potential irritant.
Sycamore	Eastern North America	Soft	Medium	2.55	Difficult	Difficult	Excellent	Good	Curly figure also common.

WOOD PROPERTIES

Species	Origin	Hardness	Strength	Weight (lb/bf)	Hand Tools	Power Tools	Gluing	Finishing	Comments
Walnut	Eastern North America	Medium	Strong	2.87	Very Easy	Very Easy	Good	Excellent	Premium furniture wood. Fairly easy to bend. Potential irritant.
Willow	Eastern North America	Very Soft	Very Weak	2.03	Very Easy	Very Easy	Good	Excellent	Sometimes stained to simulate walnut.
<i>Domestic Softwoods</i>									
Cedar, Aromatic Red	North America	Medium	Very Weak	2.45	Easy	Very Easy	Good	Good	Has strong but pleasant odor. Despite folklore, no evidence that odor or wood oil repels insects.
Cedar, Western Red	Western North America	Very Soft	Very Weak	1.67	Very Easy	Very Easy	Excellent	Good	Decay resistant, sawdust is a potential sensitizer.
Cypress	Southeastern North America	Soft	Medium	2.44	Easy	Very Easy	Excellent	Good	Decay resistant.
Fir, Douglas	Western North America	Soft	Very Strong	2.50	Easy	Very Easy	Good	Difficult	More veneer and plywood are made from this species than any other. Sawdust is potential irritant.
Hemlock	Western North America	Soft	Strong	2.34	Very Easy	Very Easy	Excellent	Excellent	No relation to the poisonous herb.
Pine, Ponderosa	Western North America	Very Soft	Weak	2.08	Easy	Very Easy	Adequate	Good	Also known as Knotty Pine.
Pine, Sugar	Western North America	Very Soft	Very Weak	1.88	Easy	Very Easy	Excellent	Good	Not durable.
Pine, Eastern White	Northeastern North America	Very Soft	Weak	1.82	Very Easy	Very Easy	Good	Excellent	Once the most commercially important timber type in America, but overuse has depleted supply.
Pine, Southern Yellow	Southern North America	Medium	Very Strong	3.07	Easy	Easy	Good	Adequate	Suitable for heavy construction.
Redwood	Western North America	Very Soft	Weak	1.82	Very Easy	Very Easy	Excellent	Good	Resists decay, holds nails and screws poorly.
Spruce, Sitka	Western North America	Very Soft	Medium	2.08	Easy	Easy	Excellent	Excellent	Sawdust is a potential irritant.
<i>Imported Woods</i>									
Balsa	Central and South America	Very Soft	Very Weak	0.83	Very Easy	Very Easy	Excellent	Poor	The softest and lightest hardwood available commercially.
Bocote	Central and South America	Medium	Medium	2.87	Easy	Easy	Adequate	Excellent	-----
Bubinga	West Africa	Very Hard	Very Strong	3.70	Easy	Moderate	Poor	Excellent	Gum pockets in the wood make gluing difficult, may also cause pitch to build up on cutters. <i>Endangered.</i>
Cocobolo	Central America	Very Hard	Very Strong	5.73	Difficult	Moderate	Poor	Good	Dulls cutting edges, may react with some oil-based and lacquer finishes. Potential irritant. <i>Endangered.</i>

WOOD PROPERTIES

Species	Origin	Hardness	Strength	Weight (lb/bf)	Hand Tools	Power Tools	Gluing	Finishing	Comments
Ebony, Gaboon	Central Africa	Very Hard	Very Strong	5.37	Difficult	Difficult	Good	Excellent	Dulls cutting edges, chips easily. Potential irritant and sensitizer. Supplies severely depleted. Endangered.
Goncolo Alves	South America	Very Hard	Very Strong	4.38	Difficult	Difficult	Good	Excellent	Interlocking and irregular grain make it difficult to work. Potential sensitizer. Endangered.
Jelutong	Indonesia, Malaysia	Very Soft	Very Weak	1.88	Very Easy	Very Easy	Excellent	Excellent	Has become a favorite among wood carvers. Is similar to Basswood but more stable.
Lacewood	Europe	Medium	Medium	3.23	Easy	Moderate	Excellent	Excellent	Related to American Sycamore
Mahogany, African	West Africa	Soft	Medium	2.19	Moderate	Easy	Good	Excellent	Similar properties and appearance as Honduran Mahogany.
Mahogany, Honduran	Central America	Soft	Medium	2.34	Very Easy	Very Easy	Excellent	Excellent	Most cherished furniture wood in world. Preferred for classic styles. Resists decay. Endangered.
Mahogany, Philippine, Lauan	Indonesia, Malaysia	Soft	Strong	2.08	Very Easy	Very Easy	Excellent	Good	Waterproof, resists decay. Premium furniture wood.
Mahogany, Philippine, Meranti	Malaysia	Medium	Medium	2.08	Easy	Easy	Good	Excellent	Sometimes substituted for Honduran Mahogany, but texture is coarser.
Padauk	West Africa, Indonesia	Medium	Strong	3.75	Easy	Very Easy	Good	Excellent	Very stable, resists decay. Potential irritant. Endangered.
Purpleheart	Central and South America	Hard	Very Strong	3.49	Moderate	Difficult	Good	Good	Resists decay. Alcohol-based finishes dissolve purple color. Lacquer finishes preserve color.
Rosewood, Bolivian	South America	Very Hard	Very Strong	4.17	Difficult	Difficult	Poor	Poor	Best substitute for Brazilian Rosewood, which is depleted. Resists decay. Potential sensitizer. Endangered.
Rosewood, Honduran	Central America	Very Hard	Strong	5.00	Difficult	Difficult	Poor	Poor	A fair substitute for Brazilian Rosewood. Resists decay. Potential sensitizer. Endangered.
Rosewood, Indian	India, Indonesia	Very Hard	Very Strong	3.91	Difficult	Difficult	Adequate	Good	Resists decay. Potential sensitizer. Endangered.
Teak	Southeast Asia, Indonesia	Medium	Strong	2.87	Moderate	Moderate	Good	Good	Very stable, resists decay. Potential sensitizer. Endangered.
Tulipwood	South America	Very Hard	Very Strong	5.00	Difficult	Difficult	Good	Excellent	Stable, resists decay. Potential sensitizer. Member of the Rosewood family.
Wenge	Central Africa	Very Hard	Strong	4.59	Moderate	Easy	Poor	Good	Stable, resists decay. Sometimes substituted for Ebony.
Zebrawood	West Africa	Hard	Strong	3.86	Easy	Difficult	Good	Excellent	Stable. Interlocking grain makes it difficult to plane and joint.