

Neck/Fingerboard Woods	Stiffness¹	Strength²	Hardness	Weight (lb/ft³)
Korina, Black/White Limba: <i>Terminalia superba</i> ³	1010	8.8	490	34
Walnut, Peruvian: <i>Juglans neotropica / olanchana</i> ⁴	1050	9.7	1080	34 to 38
Maple, Silver/Soft: <i>Acer saccharinum</i> ⁵	1140	8.9	700	35
Cedar, Spanish: <i>Cedrela odorata</i>	1000 to 1300	8.5 to 12	570 to 600	30
Mahogany, Honduras: <i>Swietenia macrophylla</i>	1390	11.7	800 to 900	31 to 41
“Mahogany,” Khaya: <i>Khaya ivorensis</i>	1380	11 to 12	830 to 900	31 to 43
Alder, Red: <i>Alnus rubra</i> ⁶	1400	10	590	28 to 30
Maple, Bigleaf: <i>Acer macrophyllum</i>	1450	10.7	850	34
Maple, European (Sycamore): <i>Acer pseudoplanatus</i>	1450	13 to 14	1090	36
Basswood: <i>Tilia americana</i> ⁷	1460	8.7	410	27
Koa: <i>Acacia koa</i>	1570	11.2	1110	42
Ziricote: <i>Cordia dodecandra</i>	1580	15.7	2200	56
Sipo: <i>Entandrophragma utile</i>	1584	15.3	1260	40
Maple, Red/Soft/Roasted: <i>Acer rubrum</i> ⁸	1640	13.4	950	34 to 39
“Cedar,” Port Orford: <i>Chamaecyparis lawsoniana</i>	1700	12.7	630	29

1 Stiffness represents a wood's resistance to FLEXING under load. Presented in 1k psi.

2 Strength represents a wood's resistance to BREAKING under load. Presented in 1k psi.

3 Limba is sold as “black” or “white” depending on what colour the wood itself happens to be. They are the same species.

4 LMI's assertion that this wood is more dense than other walnuts is absolutely false. I have confirmed this myself with wood in hand.

5 Often sold as soft maple, Silver maple is quite soft and lacks stiffness. It is the least desirable of the soft maples for neck construction: the trees have a habit of dropping large branches because the wood isn't strong enough to hold its own weight as the tree ages.

6 Carvin Guitars uses Alder as a neck wood on their Holdsworth H2 semi-hollow electric guitar.

7 Parker Guitars uses Basswood as a neck wood. It is coated in a fibreglass/carbon fibre/epoxy composite material.

8 Often sold as soft maple, Red maple is 90% as stiff as hard maple. It is lighter, easier to carve, and more stable, so it is great for necks. Also sold in as “roasted maple”: the wood has been carefully baked in an oven after kiln drying, which changes its colour to deep caramel. Roasted red maple is even more lightweight and stable, and facilitates the safe use of figured wood for necks. However, it tends to be more brittle.

“Mahogany,” Sapele: <i>Entandrophragma cylindricum</i>	1700	16 to 18	1500	42 to 46
Walnut, Black & Claro: <i>Juglans nigra / californica</i>	1680 to 1790	14.8	1010	40
Rosewood, East Indian: <i>Dalbergia latifolia</i> ⁹	1740 to 1780	17	1720 to 3170?	53 to 57
Bocote: <i>Cordia spp.</i>	1790	17	2200	59
Pau Ferro, Santos “Rosewood”: <i>Machaerium spp.</i>	1810	18.3	2140	55
Maple, Sugar/Hard: <i>Acer saccharum</i>	1830	15.8	1450	39-44
Rosewood, Honduran: <i>Dalbergia stevensonii</i> ¹⁰	?	?	2200	62
Cocobolo: <i>Dalbergia retusa</i> ¹¹	1880 and up?	19 and up?	3200?	62 to 75
Birch: <i>Betula alleghaniensis</i>	2010	16.6	1260	43
Wenge: <i>Millettia laurentii</i>	2360	22	2240	57
Bloodwood/Satine: <i>Brosimum paraense</i>	2360	21.6	2900	63 to 75
Ebony, Macassar: <i>Diospyros celebica</i> ¹²	?	?	3250	69
Ebony, African: <i>Diospyros crassiflora</i>	2490	24.3	3220	76
Purple Heart: <i>Peltogyne spp.</i>	2590	22	2390	61
Bubinga: <i>Guibourtia spp.</i>	2700	25.1	2610	58
Titanium ¹³	16000			280
Carbon Fiber	23200			100 to 130
Steel (truss rods)	29000			490

9 Hardness figures are inconsistent for this wood. I would speculate that it is *nearer* the higher figure, though perhaps not quite that high.

10 Stiffness and hardness of this wood are unknown, but I would speculate that it belongs about here.

11 There is much disagreement on the internet regarding Cocobolo. The question-mark values are “best guesses.”

12 Stiffness and hardness of this wood are unknown, but I would speculate that it belongs about here.

13 Used by Ibanez for neck reinforcements (in the style of carbon fibre rods) in their current (2010/2011) RG3xxx guitars, despite its lower stiffness and higher weight.