Solidbody Woods (and common top plates)	***Stiffness[1]***	***Strength[2]***	***Hardness***	***Weight (lb/ft³)***
Myrtle: *Umbellularia californica*	940	8	1270	40
Korina, Black/White Limba: *Terminalia superba*[3]	1010	8.8	490	34
Primavera: *Tabebuia donnell-smithii*	1040 to 1133	9.5-10.2	660-740	28 to to 30
Maple, Silver/Soft: *Acer saccharinum*[4]	1140	8.9	700	35
Redwood: *Sequoia sempervirens*	1220	9	450	27
Mahogany, Honduras: *Swietenia macrophylla*	1390	11.7	800 to 900	31 to 41
"Mahogany," Khaya: *Khaya ivorensis*	1380	11 to 12	830 to 900	31 to 43
Alder, Red: *Alnus rubra*	1400	10	590	28 to 30
Maple, Bigleaf: *Acer macrophyllum*[5]	1450	10.7	850	34
Maple, European (Sycamore): *Acer pseudoplanatus*[6]	1450	13 to 14	1090	36
Basswood: *Tilia americana*	1460	8.7	410	27
Koa: *Acacia koa*	1570	11.2	1110	42
Poplar: *Liriodendron tulipifera*[7]	1580	10	540	32
Sipo: *Entandrophragma utile*	1584	15.3	1260	40

1 Stiffness represents a wood's resistance to FLEXING under load. Presented in 1k psi.
In a thin board such as a soundboard/back/sides, wood (curly, quilt, etc) will almost certainly lower this value due to the alternating grain direction. In a thick board, the difference is usually less significant.

2 Strength represents a wood's resistance to BREAKING under load. Presented in 1k psi.
Much like stiffness, strength of thin boards is greatly affected by wood figure.

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

4 The softest of the maples sold as "soft maple."

5 Most quilted maple is of the Bigleaf variety, though Bigleaf shows up with curly figure as well. Carving texture is often quoted as being "stringy." Slightly softer than red maple.

6 This is the wood traditionally used for violin necks, backs, and sides. It is whiter in colour, smoother in carving texture, and harder than Bigleaf maple. They are otherwise quite similar.

7 It should be easy to see why poplar is a good alternative to Alder.

Data compiled by Bryce Ennis. Last updated March 30, 2011.

Spruce, Sitka: *Picea sitchensis*[8]	1600 to 1650	10.3	510	28
Ash, Swamp/Black: *Fraxinus nigra*	1630	11.8	850	35
Cherry, Black: *Prunus serotina*	1655	13.3	660	36
Maple, Red/Soft: *Acer rubrum*[9]	1640	13.4	950	34 to 39
"Mahogany," Sapele: *Entandrophragma cylindricum*[10]	1700	16 to 18	1500	42 to 46
Ash, White: *Fraxinus Americana*	1720	15	1320	43
Oak, Red: *Quercus rubra*	1755	14	1290	43
Oak, White: *Quercus alba*	1780	15.2	1360	47
Walnut, Black & Claro: *Juglans nigra / californica*	1680 to 1790	14.8	1010	40
Maple, Sugar/Hard: *Acer saccharum*[11]	1830	15.8	1450	39-44
Zebrawood: *Microberlinia brazzavillensis*[12]	1800-2340?	13.9 to 20	2097?	46-54
Birch: *Betula alleghaniensis*	2010	16.6	1260	43
Wenge: *Millettia laurentii*	2360	22	2240	57
Purple Heart: *Peltogyne spp.*	2590	22	2390	61

8 Parker Guitars uses Sitka as a body wood. It is coated in a fibreglass/carbon fibre/epoxy composite material.

9 Often sold as soft maple or curly maple, as it often develops curly figure. Sometimes sold as "roasted maple," a heating process which changes the wood's colour to a deep caramel. The harder of the maples sold as "soft maple." More stable than hard maple.

10 The only resemblance between Sapele and true mahogany is in visual appearance. Do not expect them to sound the same.

11 Most figured maple on modern guitars tends to be Red maple or Bigleaf maple because of the easy availability of figured wood in those species (compared to hard maple, which exhibits figure less frequently), which means that the sound currently associated with a maple top is usually associated with the softer maples. I do not have information on which species was used in the early Les Pauls, but I suspect that at least some of them used hard maple because of the occasional birds-eye figure in some tops. Birds-eye figure tends to be found mostly in hard maple.

12 Published information for this wood varies wildly. This may be because there is a marked difference between its light and dark stripes in terms of hardness and stiffness, which means that the structural quality of a board is greatly affected by the ratio of how much light:dark grain it contains. This interplay between hard and soft grain also makes the wood hard to work with.

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