Properties of Comparable Woods

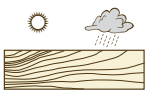
The following table is based on tests by the U.S. Forest Product Laboratory and Weyerhaeuser Technology Center.

LUMBER (12% Moisture content)	SPECIFIC GRAVITY (Density)	DIMENSIONAL R (%)	MOVEMENT T (%)	HARDNESS (lbs)	COMPRESSION PARALLEL (psi)	BENDING STRENGTH (psi)	BENDING STIFFNESS (mpsi)
Lyptus®, red	.80	8.5	11.5	1,796	9,417	18,862	2,180
Lyptus®, pink	.68	8.2	12.8	1,422	8,636	17,114	2,049
Hickory	.66	4.9	8.9	1,820	7,850	13,700	1,730
Oak, white	.68	4.4	8.8	1,360	7,440	15,200	1,780
Maple, sugar (hard)	.63	4.8	9.9	1,450	7,830	15,800	1,830
Oak, red (Northern)	.63	4.0	8.6	1,290	6,760	14,300	1,820
Birch, yellow	.62	7.3	9.5	1,260	8,170	16,600	2,010
Ash, white	.60	4.9	7.8	1,320	7,410	15,400	1,770
Walnut, black	.55	5.5	7.8	1,010	7,580	14,600	1,680
Cherry, black	.50	3.7	7.1	950	7,110	12,300	1,490
Maple, PC (big leaf)	.48	3.7	7.1	850	5,950	10,700	1,450
Maple, silver	.47	3.0	7.2	700	5,220	8,900	1,140
Poplar, yellow	.42	4.6	8.2	450	5,290	9,200	1,500
Alder, red (Western)	.41	4.4	7.3	590	5,820	9,800	1,380
Ipe	1.00	6.6	8.0	3,680	13,010	25,400	3,140
Jatoba (Brazilian Cherry)	0.83	4.0	8.0	2,551	9,349	19,032	2,170
Sapele	0.59	4.6	7.4	1,510	8,160	15,300	1,820
Philippine Mahogany*							
Dark red	0.49	3.8	7.9	780	7,360	12,700	1,770
Light red	.037	4.6	8.5	460	5,920	9,500	1,230
True Mahogany	0.47	3.0	4.1	800	6,780	11,500	1,500
African Mahogany	0.44	2.5	4.5	830	6,460	10,700	1,400

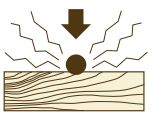
*Luan-Meranti

Specific Gravity: The specific gravity of wood is an indication of its density. The number itself is the ratio of the woods density compared to that of water (1.0). The larger the value, the more dense the wood.

Dimensional Movement (Shrinkage): Wood products shrink and swell as they absorb or lose moisture. Dimensional movement is expressed as a percent of that change.



Hardness (Janka Ball test): The value is the force required to embed a 0.444-inch-diameter steel ball to one-half its diameter into the radial and tangential surfaces of solid wood. The higher the value, the harder the lumber.



Compression Parallel: Commonly called crushing strength. The larger the number, the greater the lumbers ability is to withstand force applied to a column.

Bending Strength (MOR): The maximum load-carrying capacity in bending. The larger the number, the higher the load the lumber can support before failing.

Bending Stiffness (MOE): Bending stiffness or elasticity is a description of deformation under load or stress. The larger the number, the less deformation the lumber will have under load.