

TECHNICAL BULLETIN

Strength, Durability, Shrinkage Species Comparison

Strength and Durability Characteristics of Typical Residential and Commercial Decking Woods.

<i>SPECIES</i>	<i>Approximate Weight per MBF at 10% MC</i>	<i>Modulus of Rupture (psi)</i>	<i>Modulus of Elasticity (1000 psi)</i>	<i>Maximum Crushing Strength (psi)</i>	<i>Side Hardness (lbs)</i>	<i>Shear (psi)</i>
Ipe	6,400	25,400	3,140	13,010	3,680	2,060
Cumaru	6,300	24,800	3,050	12,200	3,200	1,980
Massaranduba	6,400	27,300	3,450	11,640	3,190	2,500
TigerWood	4,600	20,120	2,390	10,320	1,850	1,960
Purpleheart	4,800	21,300	2,420	11,380	2,060	1,830
Angelim Pedra	4,400	17,600	2,050	8,990	1,720	2,010
Southern Yellow Pine	3,100	14,200	1,880	7,750	750	1,490
California Redwood	2,600	7,900	1,100	5,220	420	1,110
Western Red Cedar	2,500	7,500	1,110	4,560	350	990

TROPICAL

Moisture-Related Shrinkage, Expansion, and Stability

<i>SPECIES</i>	<i>Shrinkage Radial to Grain</i>	<i>Shrinkage Perpendicular to Grain</i>	<i>Differential Shrinkage</i>	<i>Volumetric Shrinkage</i>	<i>Stability Ranking</i>
Ipe	6.6%	8.0%	1.4%	14.1%	#1
Cumaru	5.4%	8.4%	3.0%	13.3%	#6
Massaranduba	6.3%	9.4%	3.1%	15.1%	#8
TigerWood	4.0%	7.6%	3.6%	11.3%	#7
Garapa	6.5%	10.0%	3.5%	15.9%	#11
Purpleheart	3.2%	6.1%	2.9%	9.1%	#2
Angelim Pedra	4.4%	7.1%	2.7%	11.2%	#3
Bankirai, Yellow Balau	4.5%	8.3%	3.8%	12.4%	#9
Red Balau	4.8%	8.8%	4.0%	13.2%	#10
Dark Red Meranti	3.4%	6.6%	3.2%	9.8%	#5
Cambara	4.2%	9.1%	4.9%	12.9%	#14
Southern Yellow Pine	4.8%	7.4%	2.6%	11.8%	#4
