## RELATIVE HARDNESS OF SELECTED WOOD FLOORING SPECIES

(Ranked by Janka hardness rating)

The Janka (or side) hardness test measures the force required to embed a .444-inch steel ball to half its diameter in wood. It is one of the best measures of the ability of a wood species to withstand denting and wear. By the same token, it also is a good indicator of how hard or easy a species is to saw or nail. Northern red oak, for example, has a Janka hardness rating of 1290. Spotted gum, with a rating of 2473, is nearly twice as hard. If you're accustomed to working with red oak and decide to tackle a job with spotted gum, you can expect it to be much harder to cut and nail.

A rating is not included for bamboo, as bamboo flooring varies greatly between different manufacturers' products and between vertical and horizontal construction. Likewise, a rating is not included for cork flooring.

• Source: Hardness ratings for most species taken from the U.S. Dept. of Agriculture, Forest Service, Forest Products Laboratory, Center for Wood Anatomy Research Web site www2.fpl. fs.fed.us/TechSheets/techmenu.html. Bubinga value taken from Wood Handbook: Wood as an Engineering Material (Forest Products Society, 1999). Padauk and Brazilian maple values were provided by Wood Flooring International. Spotted gum, Sydney blue gum and Tasmanian oak values were provided by Boral Timber. The heart pine rating was provided by Mountain Lumber. The mesquite rating was provided by Mesquite Products of Texas.

Douglas fir rating is an average of ratings for Coast, Interior West and Interior North species.
Values for Brazilian cherry, purpleheart and Thai/Burmese teak represent average values.

Walnut, Brazilian	3680
Teak, Brazilian	3540
Purpleheart	2890
Cherry, Brazilian (jatoba)	2820
Bubinga	2690
Gum, spotted 247	73
Mesquite 2345	i
Mahogany, santos 2200	
Gum, Sydney blue 2023	
Merbau 1925	
Jarrah 1910	
Hickory/pecan 1820	
Padauk 1725	
Wenge 1630	
Maple, Brazilian 1500	
Sapele 1500	
Maple, hard 1450	
Cypress, Australian 1375	
Oak, white 1360	
Oak, Tasmanian 1350	
Ash, white 1320	
Beech 1300	
Oak, Northern red 1290	
Birch 1260 Iroko 1260	
Pine, heart (antique) 1225 Teak, Thai/Burmese 1078	
1010 Walnut, American black	
Cherry, black 950	
870 Pine, Southern yellow (longleaf)	
690 Pine, Southern yellow (loblolly/shortleaf)	
Douglas fir 660	

While Janka values give a general sense of hardness, many other factors also contribute to a wood floor's durability, including the type of cut (i.e. plainsawn, quartersawn), denseness of cell structure, and finish used.