

MECHANICAL PROPERTIES OF QUERCUS GARRYANA AND OTHER WOOD SPECIES

SPECIES	Compression perpendicular to grain, fiber stress at proportional limit (psi)	Shear parallel to grain, maximum shearing strength (psi)	Side hardness perpendicular to grain (lbs)	Tension perpendicular to grain, maximum tensile strength (psi)	Modular of elasticity, static bending (psi)	Modulus of rupture, static bending (psi)	Static bending, work to maximum load (inch/lbs per cubic inches)
OREGON WHITE OAK <i>Quercus garryana</i>	millions						
green	1,380	1,630	1,390	940	0.79	7,700	13.70
dry	2,119	2,620	1,660	830	1.10	10,300	9.80
WHITE OAK <i>Quercus alba</i>							
green	670	1,250	1,060	770	1.25	8,300	11.60
dry	1,070	2,000	1,360	800	1.78	15,200	14.80
NORTHERN RED OAK <i>Quercus borealis</i>							
green	610	1,210	1,000	750	1.35	8,300	13.20
dry	1,010	1,780	1,290	800	1.82	14,300	14.50
SOUTHERN RED OAK <i>Quercus rubra</i>							
green	550	930	860	480	1.14	6,900	8.00
dry	870	1,390	1,060	510	1.49	10,900	9.40
DOUGLAS FIR <i>Pseudotsuga taxifolia</i>							
green	380	900	500	300	1.56	7,700	7.60
dry	800	1,130	710	340	1.95	12,400	9.90
APITONG/ KERUING <i>Diptero carpus</i>							
green	NA	1,040	800	NA	1.79	9,200	13.90
dry	NA	1,690	1,200	NA	2.35	16,200	23.50

Information obtained from WOOD AS AN ENGINEERING MATERIAL, USDA FOREST SERVICE AGRICULTURAL HANDBOOK 72

HASSELBLAD LUMBER SALES 800-695-5290

Hasselblad Lumber Sales
 2102 North Pearl Street, Suite 301
 Tacoma, WA 98406-2550