

**Shear Strength and Percent Penetration for Materials Chart**

**Value of Percent Penetration and Shear Strength  
for Various Materials**

Material	Percent Penetration	Shear Strength, psi (MPa)
Lead	50	3500 (24.1)
Tin	40	5000 (34.5)
Aluminum	60	8000 (55.2)
Zinc	50	14,000 (9605)
Cold worked	25	19,000 (131)
Copper	55	22,000 (151.7)
Cold worked	30	28,000 (193)
Brass	50	32,000 (220.6)
Cold worked	30	52,000 (358.5)
Tobin Bronze	25	36,000 (248.2)
Cold worked	17	42,000 (289.6)
Steel, 0.10C	50	35,000 (241.3)
Cold worked	38	43,000 (296.5)
Steel, 0.40C	27	62,000 (427.5)
Cold worked	17	78,000 (537.8)
Steel 0.80C	15	97,000 (668.8)
Cold worked	5	112,000 (875.6)
Steel, 1.00C	10	115,000 (792.9)
Cold worked	2	150,000 (1034.2)
Silicon Steel	30	65,000 (448.2)
Nickel	55	35,000 (241.3)