Material Density (kg/m3) UTS (MPa) Yield Strength (GPa) Elasticity Modulus (GPa) Rigidity Modulus (GPa)

Structural Steel 7860 400 250 145 200 77

Stainless 7920 860 520 190 75

Cast Iron 7200 170 69 28

Aluminium 2710 110 100 55 70 26

Copper 8910 220 70 120 44

Magnesium alloys 1800 345 250 45 16

Titanium 4730 900 830 115

Monel Alloy 8830 675 585 345 180

Cupronickel 8940 365 110 140 52

Timber 470 100 13 0.7

Concrete 2320 28 25

Plastics 1140 75 45 2.8

Rubber 910 15

Granite 2770 20 70 4

Marble 2770 15 55 3

Glass 2190 65 4.1