

## PHYSICAL PROPERTIES OF METALS

Material	Specific Weight (N/cc)	Melting Point (°C)	Modulus of Elasticity (E) (N/mm <sup>2</sup> )	Modulus of Rigidity (G) (N/mm <sup>2</sup> )	Thermal Conductivity (k) (cal/s cm °C)	Coefficient of Linear Expansion ( $\alpha$ ) ( $\mu\text{m/m } ^\circ\text{C}$ )	Poisson's Ratio ( $\nu$ )
Aluminium	0.027	660	$0.675 \times 10^5$	$0.260 \times 10^5$	0.530	23.8	0.34
Beryllium	0.0182	1280	$2.928 \times 10^5$	-	0.380	12.3	-
Brass	0.0845	900 - 950	$0.970 \times 10^5$	$0.350 \times 10^5$	0.310	16.7	0.30 - 0.40
Bronze	0.0873	910 - 1040	$1.110 \times 10^5$	-	0.160	17.3	-
Cast Iron	0.072	1150 - 1300	$1.000 \times 10^5$	$0.0350 \times 10^5$	0.130	9.0	0.23
Copper	0.0896	1083	$1.230 \times 10^5$	$0.390 \times 10^5$	0.940	16.2	0.26
Lead	0.1134	327	$0.160 \times 10^5$	$0.076 \times 10^5$	0.083	28.3	0.45
Monel Metal	0.0858	1315 - 1350	$1.590 \times 10^5$	$0.670 \times 10^5$	0.060	14.0	0.32
Steel C 15	0.0785	1510	$2.080 \times 10^5$	$0.790 \times 10^5$	0.120	11.1	-
Steel C 35	0.0784	1490	$2.060 \times 10^5$	to	0.120	11.1	0.30
Steel C 60	0.0783	1470	$2.040 \times 10^5$	$0.890 \times 10^5$	0.110	11.1	-
Titanium	0.0454	1800	$1.050 \times 10^5$	-	0.041	11.8	-
Tungsten	0.1930	3410	$4.153 \times 10^5$	$1.770 \times 10^5$	0.480	4.5	0.17
Zirconium	0.0650	$\approx 1850$	$0.697 \times 10^5$	-	0.040	10.0	-