

Physical and Mechanical Properties of Molybdenum

Atomic Number	42
Atomic Weight, amu	95.94
Melting Point, °C	2610
Boiling Point, °C	4612
Density, gm/cc	10.22
Lattice Structure	Body Centered Cubic
Lattice Constant, Å	3.1399
Atomic Volume, cc/gm atom	9.41
Specific Heat@ 20°C, J/Kg.K	270
Vapor Pressure, mm Hg, @	
727 °C	7.58×10^{-23}
927 °C	1.48×10^{-17}
1227 °C	2.58×10^{-12}
1527 °C	7.88×10^{-10}
2127 °C	1.54×10^{-4}
2727 °C	4.80×10^{-2}
3227 °C	1.58
Electrical Resistivity, microhm-cm, @	
27 °C	5.52
100 °C	7.40
327 °C	13.15
500 °C	17.10
700 °C	22.20
927 °C	29.51
1227 °C	38.14
1527 °C	47.02
1727 °C	53.06
1927 °C	59.18
2127 °C	65.37
2327 °C	71.61
2527 °C	77.90
Temperature coefficient of Electrical Resistivity, per °C (20 – 100 °C)	0.0045
Thermal Conductivity, cal/sq.cm/cm/sec/ °C,@	
20 °C	0.340
100 °C	0.330
500 °C	0.290
1000 °C	0.250
1500 °C	0.200
Linear Coefficient of Thermal Expansion per °C, @	
20 °C	5.2×10^{-6}
2000 °C	5.8×10^{-6}
2500 °C	6.5×10^{-6}
Electron Work Function, eV	4.20
Young's Modulus, psi, (room temp)	46×10^6
Conductivity, % IACS	31