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## 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	$7.58 \times 10^{-23}$
927 °C	$1.48 \times 10^{-17}$
1227 °C	$2.58 \times 10^{-12}$
1527 °C	$7.88 \times 10^{-10}$
2127 °C	$1.54 \times 10^{-4}$
2727 °C	$4.80 \times 10^{-2}$
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	$5.2 \times 10^{-6}$
2000 °C	$5.8 \times 10^{-6}$
2500 °C	$6.5 \times 10^{-6}$
Electron Work Function, eV	4.20
Young's Modulus, psi, (room temp)	$46 \times 10^6$
Conductivity, % IACS	31