

OVERVIEW		
Full Name	Cadmium (None)	
Symbol	Cd	
Atomic Number	48	
Series	Transition Metal	
Block / Group / Period	d-block   Group 12   Period ...	
Electron Config.	[Kr]5s24d10	
Phase at STP	Solid	
Colour	Silver	
Discovery	1817 in Germany	
THERMAL PROPERTIES		
Melting Point	321.07 °C	°C
Melting Point (abs.)	594.22 K	K
Boiling Point	767 °C	°C
Boiling Point (abs.)	1040 K	K
Heat of Fusion	6.3 kJ/mol	kJ/mol
Heat of Vaporization	100 kJ/mol	kJ/mol
Specific Heat (solid)	230 J/(kg K)	J/(kg·K)
Thermal Conductivity	96 W/(m K)	W/(m·K)
Thermal Expansion	0.0000308 K <sup>-1</sup>	K <sup>-1</sup>
MECHANICAL PROPERTIES		
Density (solid, STP)	8.65 g/cm <sup>3</sup>	g/cm <sup>3</sup>
Density (liquid, MP)	7.996 g/cm <sup>3</sup>	g/cm <sup>3</sup>
Young's Modulus	50 GPa	GPa
Shear Modulus	19 GPa	GPa
Bulk Modulus	42 GPa	GPa
Poisson's Ratio	0.3	
Speed of Sound	2310 m/s	m/s
Mohs Hardness	2	
Brinell Hardness	203 MPa	MPa
ELECTRICAL PROPERTIES		
Type	Conductor	
Conductivity	1.4×10 <sup>7</sup> S/m	S/m
Resistivity	7.000000000002×10 <sup>-8</sup> mΩ/m	mΩ/m
Superconducting Pt.	0.517	K
MAGNETIC PROPERTIES		
Type	Diamagnetic	
Vol. Susceptibility	-0.0000199	
Mass Susceptibility	-2.3×10 <sup>-9</sup> m <sup>3</sup> /Kg	m <sup>3</sup> /kg
REACTIVITY		
Valence	2	
Electronegativity	1.69	(Pauling)
Electron Affinity	0 kJ/mol	kJ/mol
Ionization Energies	867.8, 1631.4	kJ/mol
ATOMIC DIMENSIONS		
Atomic Radius	161 pm	pm
Covalent Radius	144 pm	pm
Van der Waals Radius	158 pm	pm
CRYSTAL STRUCTURE		
Structure	Simple Hexagonal	
Lattice Constant	297.94, 297.94, 561.86 pm	
Space Group	P63/mmc	#194
ISOTOPES & NUCLEAR		
Stability	Stable	
Stable Isotopes	106Cd, 108Cd, 110Cd, 111Cd, 112C...	
Isotopic Abundance	106Cd1.25%108Cd0.89%110Cd12.49%1...	
Known Isotopes	95Cd ■ 132Cd (38 total)	
Neutron Cross Sect.	2450	barns
ELEMENTAL ABUNDANCES		
Universe	2×10 <sup>-7</sup> %	%
Earth's Crust	0.000015%	%
Oceans	5×10 <sup>-9</sup> %	%
Human Body	0.00007%	%
HEALTH & SAFETY		
DOT Hazard Class	6.1	
RTECS Number	EU9800000	
NFPA Health/Fire/Rx	0 / 0 / 0	