Periodic Table of Elements

View online at https://periodic-table.pro

Cadmium

Fish are not normally cast out of pure cadmium, but if you're making a periodic table poster, why not? The hint of yellow is a bit of cadmium oxide, a favorite pigment of the impressionist painters, notably Monet.

01. OVERVIEW

Symbol	**Cd**
Atomic number	**48**
Atomic weight	**112.4**
Density	**8.65 g/cm³**
Melting point	**321.07 °C**
Boiling point	**767 °C**

02. THERMAL PROPERTIES

Phase	**Solid**
Melting point	**321.07 °C**
Boiling point	**767 °C**
Absolute melting point	**594.22 K**
Absolute boiling point	**1040 K**
Critical pressure	**N/A**
Critical temperature	**N/A**
Heat of fusion	**6.3 kJ/mol**
Heat of vaporization	**100 kJ/mol**
Heat of combustion	**N/A**
Specific heat	**230 J/(kg K)**
Adiabatic index	**N/A**
Neel point	**N/A**
Thermal conductivity	**97 W/(m K)**
Thermal expansion	**0.0000308 K^{-1}**

03. PHYSICAL PROPERTIES

Density	**8.65 g/cm³**
Density (liquid)	**7.996 g/cm³**
Molar volume	**0.000012996**
Molar mass	**112.411 u**
Brinell hardness	**203 MPa**
Mohs hardness	**2 MPa**
Vickers hardness	**N/A**
Bulk modulus	**42 GPa**
Shear modulus	**19 GPa**
Young modulus	**50 GPa**
Poisson ratio	**0.3**
Refractive index	**N/A**
Speed of sound	**2310 m/s**
Thermal conductivity	**97 W/(m K)**
Thermal expansion	**0.0000308 K^{-1}**

04. REACTIVITY

Valence	**2**
Electronegativity	**1.69**
Electron affinity	**0 kJ/mol**
Ionization energies	**867.8, 1631.4, 3616 kJ/mol**

05. SAFETY

Autoignition point	250 °C
Flashpoint	N/A
Heat of combustion	N/A

06. CLASSIFICATIONS

Alternate names	N/A
Names of allotropes	N/A
Block, Group, Period	d, 12, 5
Electron configuration	[Kr]$4d^{10}5s^2$
Color	Silver
Discovery	1817 in Germany
Gas phase	N/A

07. ELECTRICAL PROPERTIES

Electrical type	Conductor
Electrical conductivity	1.4×10^{7} S/m
Resistivity	7×10^{-8} m Ω
Superconducting point	0.517

08. MAGNETIC PROPERTIES

Magnetic type	Diamagnetic
Curie point	N/A
Mass magnetic susceptibility	-2.3×10^{-9} m^3/Kg
Molar magnetic susceptibility	-2.59×10^{-10} m^3/mol
Volume magnetic susceptibility	-0.0000199

09. ABUNDANCES

In universe	2×10^{-7}%
In sun	6×10^{-7}%
In meteorites	0.00%
In earth's crust	0.00%
In oceans	5×10^{-9}%
In humans	0.00%

10. ATOMIC DIMENSIONS AND STRUCTURE

Atomic radius	161 pm
Covalent radius	148 pm
Van der Waals radius	158 pm
Crystal structure	Simple Hexagonal
Lattice angles	π/2, π/2, 2 π/3
Lattice constants	297.94, 297.94, 561.86 pm
Space group name	$P6_3/mmc$
Space group number	194

11. NUCLEAR PROPERTIES

Half-Life	Stable
Lifetime	Stable
Decay mode	N/A
Quantum numbers	$^{1}S_{0}$
Neutron cross section	2450
Neutron mass absorption	1.4
Known Isotopes	^{95}Cd, ^{96}Cd, ^{97}Cd, ^{98}Cd, ^{99}Cd, ^{100}Cd, ^{101}Cd, ^{102}Cd, ^{103}Cd, ^{104}Cd, ^{105}Cd, ^{106}Cd, ^{107}Cd, ^{108}Cd, ^{109}Cd, ^{110}Cd, ^{111}Cd, ^{112}Cd, ^{113}Cd, ^{114}Cd, ^{115}Cd, ^{116}Cd, ^{117}Cd, ^{118}Cd, ^{119}Cd, ^{120}Cd, ^{121}Cd, ^{122}Cd, ^{123}Cd, ^{124}Cd, ^{125}Cd, ^{126}Cd, ^{127}Cd, ^{128}Cd, ^{129}Cd, ^{130}Cd, ^{131}Cd, ^{132}Cd
Stable Isotopes	^{106}Cd, ^{108}Cd, ^{110}Cd, ^{111}Cd, ^{112}Cd, ^{114}Cd
Isotopic Abundances	^{106}Cd - 1.25%, ^{108}Cd - 0.89%, ^{110}Cd - 12.49%, ^{111}Cd - 12.8%, ^{112}Cd - 24.13%, ^{114}Cd - 12.22%, ^{114}Cd - 28.73%, ^{116}Cd - 7.49%