

# Beryllium element

Beryllium, symbol Be, atomic number 4, is formed by stellar nucleosynthesis. It is rare in the universe and only found combined in minerals.

## Overview

- Latin name: Beryllium - ['bɛ'rɪliəm']
- English name: Beryllium - [bɛ'rɪliəm]
- Year discovered: 1798
- CAS Number: CAS7440-41-7
- Electron shell: K2-L2-MO-NO-OO-PO-QO-RO

## Properties

- Atomic number: 4
- Atomic weight (Relative atomic mass): 9.01218306156802 (g/mol)
- Density: 1.85 (g/cm<sup>3</sup>)
- Melting point: 1287.0°C = 2348.6°F = 1560.15K
- Boiling point: 2469.0°C = 4476.2°F = 2742.15K
- Valence electrons: II
- Block: s - block
- Period: 2
- Group: IIA
- Phase: solid
- Electron configuration: 1s<sup>2</sup> 2s<sup>2</sup>
- Ion charge: Be<sup>2+</sup>
- The ionization potential of an atom: 9.323 (eV)
- Atomic radius: 112 (pm)

- Covalent radius: 99 (pm)
- Van der Waals radius: 153 (pm)
- Electrical conductivity: 28089887.6404494 (S/m)
- Electrical type: Conductor
- Magnetic type: Diamagnetism
- Volume magnetic susceptibility:  $-2.328 \cdot 10^{-5}$
- Mass magnetic susceptibility:  $-1.26 \cdot 10^{-8}$
- Molar magnetic susceptibility:  $-1.136 \cdot 10^{-10}$  (m<sup>3</sup>/mol)
- Resistivity:  $3.56 \cdot 10^{-8}$  ( $\Omega \cdot m$ )
- Superconducting point:  $-273.12^{\circ}\text{C} = -459.62^{\circ}\text{F} = 0.03\text{K}$
- Electronegativity: 1.57
- Electron affinity: -48.0 kJ/mole

## Prevalence

- The universe contains beryllium at a rate of 0.0000001%.
- The Sun contains Beryllium at a concentration of 0.000001 percent.
- Oceans contain "Beryllium" at the rate of:  $6 \cdot 10^{-9}$  %
- Human body contains "Beryllium" at the rate of:  $5.136553 \cdot 10^{-8}$  %
- The Earth's crust consists of "Beryllium" at the rate of:  $2.8 \cdot 10^{-4}$  %
- Meteorites consist of "Beryllium" at the rate of:  $2.9 \cdot 10^{-5}$  %