

OVERVIEW		
Full Name	Carbon (None)	
Symbol	C	
Atomic Number	6	
Series	Nonmetal	
Block / Group / Period	p-block Group 14 Period ...	
Electron Config.	[He]2s22p2	
Phase at STP	Solid	
Colour	Black	
Allotropes	Graphite, Diamond, AmorphousCarb...	
Discovery	3750 BC	
THERMAL PROPERTIES		
Melting Point	3550 °C	°C
Melting Point (abs.)	3823 K	K
Boiling Point	4027 °C	°C
Boiling Point (abs.)	4300 K	K
Heat of Fusion	105 kJ/mol	kJ/mol
Heat of Vaporization	715 kJ/mol	kJ/mol
Specific Heat (solid)	710 J/(kg K)	J/(kg·K)
Thermal Conductivity	140 W/(m K)	W/(m·K)
Thermal Expansion	7.1×10 ⁻⁶ K ⁻¹	K ⁻¹
MECHANICAL PROPERTIES		
Density (solid, STP)	2.26 g/cm ³	g/cm ³
Bulk Modulus	33 GPa	GPa
Speed of Sound	18350 m/s	m/s
Mohs Hardness	0.5	
ELECTRICAL PROPERTIES		
Type	Conductor	
Conductivity	100000 S/m	S/m
Resistivity	0.00001 m ?	Ohm·m
MAGNETIC PROPERTIES		
Type	Diamagnetic	
Vol. Susceptibility	-0.000014	
Mass Susceptibility	-6.2×10 ⁻⁹ m ³ /Kg	m ³ /kg
REACTIVITY		
Valence	4	
Electronegativity	2.55	(Pauling)
Electron Affinity	153.9 kJ/mol	kJ/mol
Ionization Energies	1086.5, 2352.6	kJ/mol
ATOMIC DIMENSIONS		
Atomic Radius	67 pm	pm
Covalent Radius	76 pm	pm
Van der Waals Radius	170 pm	pm
CRYSTAL STRUCTURE		
Structure	Simple Hexagonal	
Lattice Constant	246.4, 246.4, 671.1 pm pm	
Space Group	P63/mmc	#194
ISOTOPES & NUCLEAR		
Stability	Stable	
Stable Isotopes	12C, 13C	
Isotopic Abundance	12C98.93%13C1.07%	
Known Isotopes	8C ■ 22C (15 total)	
Neutron Cross Sect.	0.0035	barns
ELEMENTAL ABUNDANCES		
Universe	0.5%	%
Earth's Crust	0.18%	%
Oceans	0.0028%	%
Human Body	23%	%
HEALTH & SAFETY		
DOT Hazard Class	4.2	
RTECS Number	HL4158550	
NFPA Health/Fire/Rx	0 / 0 / 0	