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| Element Descriptor | Detailed Description | Unit | Abbreviation |
| Atomic Number | The atomic number refers to the number of protons found in the nucleus of an atom. Each element on the periodic table has a unique atomic number, which determines its position in the periodic table. | - | AN |
| Atomic Mass | Atomic mass refers to the mass of an atom, which is primarily determined by the total number of protons and neutrons in its nucleus. | g/mol | AM |
| Group | In the context of the periodic table, a group refers to a vertical column of elements. Elements within the same group share similar chemical properties and exhibit certain patterns in their atomic structure. | - | G |
| Period | In the context of the periodic table, a period refers to a horizontal row of elements. Elements within the same period have the same number of electron shells or energy levels. | - | P |
| Atomic Radius | Atomic radius refers to the size of an atom, specifically the distance from the nucleus to the outermost electron shell. | Å | AR |
| Covalent Radius | Covalent radius refers to the size of an atom when it is involved in a covalent bond. It represents the distance between the nucleus of an atom and the outermost edge of its electron cloud, where covalent bonding occurs. | Å | CR |
| Ionic Radius | Ionic radius refers to the size of an ion, which is formed when an atom gains or loses electrons to achieve a stable electron configuration. It represents the distance between the nucleus and the outermost edge of the electron cloud of an ion. | Å | IR |
| Atomic Volume | Atomic volume refers to the amount of space occupied by a single atom. | cm3/mol | AV |
| Number of Electrons | Electrons are negatively charged subatomic particles that orbit around the nucleus in specific energy levels or electron shells. | - | NOE |
| Number of Neutrons | Neutrons are neutral subatomic particles found in the nucleus of an atom, alongside protons. | - | NON |
| Number of Protons | Protons are positively charged subatomic particles found in the nucleus of an atom. | - | NOP |
| Electronegativity-Allrod Rochow | Allred-Rochow electronegativity is a scale that quantifies the electronegativity of elements based on their atomic properties. The Allred-Rochow electronegativity scale is an empirical scale. | - | EGAR |
| Electronegativity-Pauling | Pauling electronegativity values are assigned to each element based on a relative scale. | - | EGP |
| Melting Point | Melting point refers to the temperature at which a substance transitions from a solid state to a liquid state. | K | MP |
| Boiling Point | Boiling point refers to the temperature at which a substance changes from its liquid state to its gaseous state throughout the bulk of the liquid. | K | BP |
| Heat of Fusion | The heat of fusion, also known as the enthalpy of fusion, is the amount of heat energy required to change a substance from its solid state to its liquid state at its melting point, while maintaining the temperature constant. | kJ/mol | HOF |
| Density | Density is a physical property that relates to the mass of a substance per unit volume. | g/cm3 | D |
| First Ionization Potential | The first ionization potential, also known as ionization energy, is the minimum amount of energy required to remove the outermost electron from an atom in its gaseous state. It is a measure of the attraction between the positively charged nucleus and the negatively charged electron. | eV | FIP |
| Electron Work Function | The electron work function, also known as the work function or the ionization potential, is the minimum energy required to remove an electron from the surface of a material. | eV | EWF |