

# Chemist Reference Sheet



**Acid:** a hydrogen-containing compound that releases hydrogen ions in solution.

**Alloy:** a material made up by combining two or more metals.

**Analysis:** breaking down a compound into two or more substances.

**Anhydrous:** free from water.

**Atom:** the smallest unit of an element that can enter into the making of a chemical compound.

**Atomic weight:** the weight of an atom compared with the weight of an oxygen atom set at 16.

**Base:** a compound containing the hydroxide group (OH).

**Catalyst:** a substance that helps in a chemical reaction without itself being changed.

**Chemical change:** a change of a substance into another substance having different properties.

**Chemistry:** a branch of science dealing with the compositions of substances and the changes that can be made in them.

**Combustion:** burning; a chemical change that produces heat and light.

**Compound:** a substance consisting of two or more different kinds of atoms in definite proportions by weight.

**Crystal:** a solid in which atoms or molecules are arranged in a definite pattern.

**Density:** the weight of a liquid or a solid in grams per  $\text{cm}^3$  or milliliter.

**Distillate:** a liquid that has been turned into vapor and again cooled into a liquid.

**Distillation:** the process of producing a distillate.

**Ductile:** capable of being drawn out into a wire.

**Electrolysis:** breaking down a substance by passing an electric current through it.

**Electrolyte:** a substance that, when in a solution or when melted, will conduct an electric current.

**Element:** a substance that contains only one kind of atoms.

**Equation:** a complete description of a chemical reaction by the use of symbols, formulas, and signs.

**Evaporation:** the changing of a substance into vapor; also the process of removing water by heating.

**Filtrate:** a liquid obtained by filtration.

**Filtration:** the process of straining a liquid from a solid through porous material, usually filter paper.

**Formula:** a group of symbols and numbers giving the composition of a compound.

**Hydrate:** a compound containing loosely bound water of hydration (water of crystallization) that can be driven off by heating.

**Hydroxide:** a compound that contains the hydroxyl (OH) radical.

**Ion:** an electrically charged atom or group of atoms (radical).

**Malleable:** capable of being hammered or rolled into a thin sheet.

**Matter:** anything that takes up space and has weight.

**Metal:** an element that is a good conductor of electricity, has luster, and whose oxide forms a base with water.

**Metalloid:** an element that has properties of both metals and nonmetals.

**Mixture:** a mingling of substances not combined chemically.

**Molecular weight:** the sum of the atomic weights of the atoms that make up a molecule of a compound.

**Molecule:** the smallest unit of a compound that can exist in the free state.

**Neutralization:** the reaction of an acid and a base to give a salt and water.

**Nonmetal:** an element that is a poor conductor of electricity, does not have luster, and whose oxide forms an acid when combined with water.

**Organic chemistry:** the chemistry of the carbon compounds.

**Oxidation:** the process by which a substance combines with oxygen.

**Precipitate:** an insoluble solid formed in a solution by chemical reaction.

**Radical:** a group of atoms that behave chemically as a single atom.

**Reaction:** a chemical change.

**Reduction:** removal of oxygen; the opposite of oxidation.

**Salt:** compound (other than water) formed by the reaction of an acid and a base.

**Saturated solution:** a solution that contains the maximum amount of solute under the conditions.

**Solubility:** the number of grams of a solute needed to make a saturated solution in 100 grams of solvent.

**Solute:** the substance dissolved in a solvent.

**Solution:** a non-settling mixture of a solute in a solvent.

**Solvent:** a liquid in which a solute is dissolved.

**Sublimation:** a process by which a solid is turned into vapor and again cooled into a solid without passing through a liquid stage.

**Subscript:** a small numeral indicating the number of atoms of a certain element in the formula of a compound.

**Substance:** any specific kind of matter whether element, compound, or mixture.

**Symbol:** a letter or two letters representing one atom of an element.

**Synthesis:** the making up of a compound from simpler compounds or from elements; the opposite of analysis.

**Valence:** the number of hydrogen atoms which one atom of an element can displace or with which it can unite.

## Current Meaning