VBEST

IGCSE CHEMISTRY DEFINITION - 0620 -

BY MR JOE

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Glossary

Acid | substance produces hydrogen ions in water (proton donor)

Alkali | base that dissolves in water to produce OH^- ions

Alloy | mixture of two or more elements, at least one of which is a metal.

Amphoteric | substances can behave as acids or as bases depending upon their surroundings.

Atom | the number of protons and electrons are equal.

Avogadro's constant | the number of atoms or molecules in one mole of a substance, equal to 6.023×10^{23}.

Base | substance that neutralize an acid (proton acceptor)

Bond | the chemical link that holds molecules together.

Covalent bond | a bond between atoms formed when atoms share electrons to achieve a full outer shell of electrons.

Ionic bond | bonding forms between two atoms when an electron is transferred from one atom to the other, forming a positive-negative ion pair.

Boiling point | temperature at which liquid becomes gas.

Brownian motion | random motion of particles

Catalyst | substance that increases the rate of a chemical reaction without itself undergoing any chemical change.

Compound | substance that contains atoms of 2 or more elements chemically bonded together. It can be decomposed into two or more different substances by means of a chemical reaction.

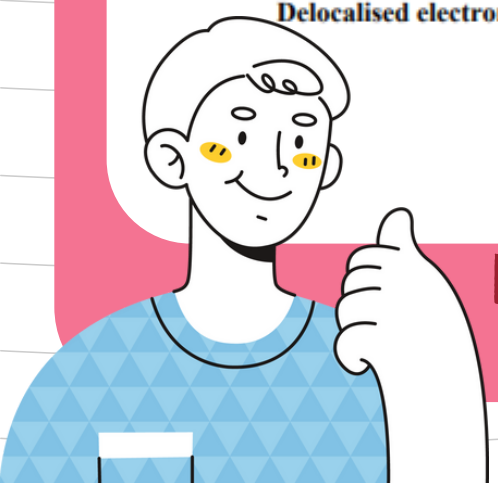
Anhydrous compound | substance containing no water.

Covalent compound | atoms in the compound are bound together by shared electrons.

Hydrated compound | containing water of crystallisation, which can be removed by heating strongly.

Ionic compound | compound with a positive ion joins with a negative ion through electrostatic force.

Delocalised electrons | electrons that are not associated with a particular atom, eg in a metal, outer electrons can be free to move through the solid.



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Diffusion | net movement of molecules down a concentration gradient, as a result of their random movement.

Dissociation | breaking up of a molecule into ions when dissolved in water.

Ductile | the ability to be hammered thin or stretched into wire without breaking.

Element | substance that contains only one type of atom. It cannot be decomposed into simpler substances.

Electrode | a conductor that emits or collects electrons in a electrolytic cell.

Anode electrode | positive electrode

Cathode electrode | negative electrode

Electrolysis | the decomposition (breakdown) of a compound using an electric current.

Electrolyte | substances which, when melted or dissolved in water, conduct electric current.

Electroplating | Using electrolysis to deposit a thin layer of metal onto another metal, usually to improve its appearance or corrosion resistance.

Endothermic | chemical reactions in which heat energy is absorbed from the surroundings.

Equilibrium | a situation where the forward and backward reactions happen at the same rate, and the concentrations of the substances stay the same.

Excess | substance which is more than enough to react with another reactant.

Exothermic | chemical reactions in which heat energy is given out to the surroundings.

Intermolecular force | attractive forces between molecules. When a simple molecular substance melts or boils, it is the intermolecular forces that are broken.

Electrostatic force | force of attraction between particles with opposite charges.

Galvanisation | coating iron or steel with a layer of zinc to prevent rusting.

Hallide | ion formed when a halogen atom gains one electron.

Halogen | group 7 elements

Homologous series | a 'family' of organic compounds that have the same functional group and similar chemical properties.

Hydrocarbon | a compound that contains hydrogen and carbon only.

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Saturated hydrocarbon | all hydrogen atoms and carbon atoms are bonded together with single bonds

Unsaturated hydrocarbon | contains at least one double or triple bond between the carbon atoms.

Isomer | Chemicals that have the same molecular formula but different arrangements of atoms.

Isotopes | substances with the same atomic number but different mass number.

Ions | Electrically charged particle, formed when an atom or molecule gains or loses electrons.

Anion | negatively charged ion

Cation | positively charged ion

Lattice | regular arrangement of particles

Malleable | capable of being hammered or pressed into a new shape without being likely to break or return to the original shape.

Relative atomic mass, A_r | the ratio of the average mass per atom of the naturally occurring form of an element to 1/12 of the mass of nuclide ^{12}C.

Relative molecular mass, M_r | the sum of the relative atomic masses of all the atoms that comprise a molecule.

Melting point | temperature at which a solid becomes a liquid at normal atmospheric pressure.

Mixture | substance that made up of at least two substances which may be elements or compounds physically mixed together but not chemically combined together.

Mole | is the unit for amount of substance.

Molten | a liquid substance formed by heating a solid.

Monomer | Small molecule that can join end to end with other monomers to form a polymer molecule.

Neutralisation | reaction between an acid and a base to form a salt plus water.

Proton number (atomic number) | number of protons in the nucleus

Nucleon number | the sum of the number of protons and neutrons in the nucleus.

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Oxidation | the gain of oxygen, or loss of electrons, by a substance during a chemical reaction.

Oxidising agent (oxidant) | chemical that reduced and causes the other chemical to be oxidised by providing oxygen.

Polymer | A large molecule formed from many identical smaller molecules known as monomers.

Condensation reaction | Chemical reaction in which monomers (small molecules) join together to produce a polymer and a small molecule such as water.

Decomposition reaction | breaking down of substances into simpler compounds or elements.

Displacement reaction | type of reaction where a more reactive element replaces a less reactive element in a compound.

Hydrolysis reaction | a large molecule is split into two smaller molecules by reaction with water.

Redox | oxidation and reduction take place at the same time in a reaction

Reducing agent (reductant) | chemical that oxidised and causes the other chemical to be reduced by removing oxygen.

Reduction | the loss of oxygen, or gain of electrons, by a substance during a chemical reaction.

Retention factor, R_f | the ratio of the distance the spot moved above the origin to the distance the solvent front moved above the origin.

Sacrificial protection | protection of iron or steel against corrosion by using a more reactive metal.

Solute | the dissolved substance in a solution.

Solution | mixture formed by a solute and a solvent.

Aqueous solution | solutions where water is the solvent.

Concentrated solution | solution that contains a large amount of solute relative to the amount that could dissolve.

Dilute solution | solution contains a relatively low concentration of solute.

Saturated solution | solution that holds the maximum possible amount of dissolved material.

Solvent | the liquid in which the solute dissolves to form a solution.

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