

obeys either Raoult's law or Henry's law and the activity coefficient of each component is equal to one.

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in water the cations and the anions separate. They become free to move about in the water allowing the solution to conduct electrical current.

An ionic compound is a giant structure of ions. The

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## Molecular Solids 9<sup>sc</sup> 12<sup>th</sup>

A Molecular Solid is a solid consisting of discrete molecules. The cohesive forces that bind the molecules together are van der Waals forces, dipole-dipole interactions, quadrupole interaction,  $\pi-\pi$  interactions, hydrogen bonding, halogen bonding, London dispersion forces and in some molecular solids, Coulombic.

In other words we can also say that molecular solids are solids that are essentially collections of molecules held

ions have a regular repeating arrangement called an ionic lattice. The lattice is formed because the ions attract each other and form a regular pattern with oppositely charged ions next to each other.

Example :- NaCl and  $\text{Ca}(\text{CO}_3)$  ionic compounds are all generally found in nature as ionic solids.

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forces between the different molecules in that particular solution

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## Ideal Solution

An azeotropic or ideal solution is a solution in which the gas phase exhibits thermodynamic properties analogous to those of a mixture of ideal gases. The concept of an ideal solution is fundamental to chemical thermodynamics and its applications, both in the use of colligative properties.

The enthalpy of mixing is zero as is the volume change on mixing by definition, the entropy is zero. The enthalpy of mixing is the state ideal the behaviour of the solution becomes. The vapour pressure of the solution,

together by intermolecular forces

The solid structure is maintained

by IMFs rather than bonds. The

forces holding the solids together

are much weaker than for other

types of solids. As a result these

materials have much lower

melting points. Molecular solids

also have localized electrons

molecules are identical to the interaction between molecules of different components. That is there is no forces acting between the components: no van der Waals nor any Coulomb forces. we assume ideal properties for dilute solutions. we use the concept of  $\gamma_{\pm}$  ideal solutions for concentrated solutions.