

## States of Matter

In this states of matter you will clearly understand the the Solid state , Liquid state and Gaseous state. This is very useful for understanding the chapter in class 9.

Matter around us exist in three different state's which we call as solid state, liquid state and Gaseous state.

### Solid State

solid is the state of matter which is possess rigidity, incompressible and it has definite shape and definite volume.

### Properties of solid

- 1.They have definite shape and distinct boundaries and fixed volumes
- 2.solids has tendency to maintain their shape when subjected to outside force.
- 3.Solids either do not diffuse or diffuse at a very slow rate.
4. Solids may break under force but it difficult to change their shape, so they are rigid.
- 5.Solids have high density while compared to liquid and gas.
- 6.Mass per unit volume of a substance is called density.

Formula for density

$$\text{Density} = \frac{\text{Mass}}{\text{volume}}$$
$$\text{m/v}$$

### Liquid state

Liquid is defined as that form of matter, which possess a fixed volume, but has no fixed shape.

- 1.Liquids do not have a definite shape the take up the shape of the container in which they are kept.
- 2.Liquid flow one change shape so they are not rigid
- 3.In science fluid is the common name of gas and liquid.
- 4.Solid liquid and gases can diffuse into liquid.
- 5.Liquid or almost incompressible.
- 6.The attraction force between the particles of the liquid is greater than the gas but less than the solid.
- 7.the rate of diffusion of liquids is higher than that of solids
- 8.Density of a liquid is generally less than that of its solid form.



## **Gaseous state**

1. Gases have a tendency to flow as liquid. Therefore they are considered as fluids.
2. Gases show the property of diffusing very fast into other gases due to high speed of particles and has large spaces between them.
3. It is highly compressible. The LPG gas and hospital cylinders are examples of compressed gas.
4. The particles move at high speed in the gaseous form.
5. All living beings need to breathe for their survival. So solid, liquid and gas diffuse into liquid.
6. Gases have less density. Gas weighs less than the solid and liquid.

