

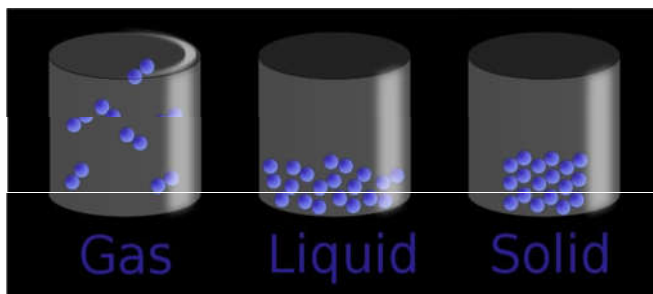


STD 10-FIRST BELL 2.0-CHEMISTRY-CLASS

Chapter-2

GAS LAWS AND MOLE CONCEPT

Difference between Solid, Liquid and Gas molecules



Solid	Liquid	Gas
Definite shape	Indefinite shape	Indefinite shape
Cannot flow	Flow	Flow
Their particles having minimum energy	Their particles have energy higher than those solids	Their particles have the highest energy.
Eg stone, wood, pen	Eg water, milk, petrol ...	Hydrogen, Oxygen, Carbon monoxide

CHARACTERISTICS OF GASES

- Each gas contains numerous minute molecules.
 - When compared to the total volume of a gas, the real volume of molecules is very less.
 - The molecules of a gas are in a state of rapid motion in all directions.
 - During the random motion of gas molecules, they collide with each other and also collide with the walls of the container in which it is kept.
 - The collision of the gas molecules with the wall of the container, creates the pressure of the gas.
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- As the collisions of molecules are perfectly elastic in nature, there is no loss of energy.
 - There is no attraction between gas molecules and with the wall of the container.

Complete the Table (ON THE BASIS OF ABOVE PROPERTIES)

Energy of gas molecules	Very high
Distance between the molecules
Freedom of movement of molecules
Attractive force between molecules	Very Low

VOLUME OF A GAS AND PRESSURE

- Volume of a gas is the volume of the container which it occupies.
- During the random motion of gas molecules, they collide with each other and also collide with the walls of the container in which it is kept. This collision with the walls accounts for the pressure of a gas.
- Force exerted per unit area is called pressure.
- Force on unit area = $\frac{\text{Total force exerted on the surface}}{\text{Surface area}}$

HOME WORK

- Write a short note on the volume and pressure of a gas.

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