



Gaseous fuels

1. Compressed natural gas (CNG) or Marsh gas

- CNG is a natural gas compressed to high pressure of 1000 atm
- It is a less pollution causing fuel.
- During combustion, no sulphur and nitrogen gases are evolved. It is a better fuel than petrol and diesel for automobiles.

Composition

Methane – 88.5%
Ethane – 5.5%
Propane – 3.7%
Butane – 1.8%
Pentane – 0.5%

Properties

It is a safer fuel.

Its ignition temperature is 550⁰C (higher temperature than gasoline and diesel).

CNG mixes with air easily.

CNG leads to lesser emission than gasoline.

CNG vehicles do not have pollutants like smoke, SO₂, SO₃ etc.

Uses

It is an excellent domestic fuel that can be transported through pipes.

It is used as a fuel in thermal power plants for generating electricity.

It is used as a source of hydrogen gas in fertilizer industries.

It is used as an alternative to petrol and diesel for transport of vehicles.



2. Liquefied petroleum gas (LPG)

- It is obtained as one of the top fractions in the fractional distillation of petroleum.
- It can be easily liquefied under pressure & stored in cylinders.
- It is a mixture of propane and butane.
- The composition is,

n-Butane – 38.5%,

Iso – Butane – 37 %,

Propane – 24.5%, **Butylene** and ethane - rest

- Its **calorific value** is **27,800 Kcal /m³**.

Uses:

- It is used as cooking gas in domestic ovens as well as in furnaces.
- It is used as a motor fuel.