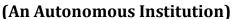


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GASEOUS FUELS

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

 $\begin{array}{lll} \text{Methane} & -88.5\% \\ \text{Ethane} & -5.5\% \\ \text{Propane} & -3.7\% \\ \text{Butane} & -1.8\% \\ \text{Pentane} & -0.5\% \end{array}$

Properties

It is a safer fuel.

Its ignition temperature is 550°C (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.



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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.