8. Static Electricity

- Objects get charged when rubbed with another material.

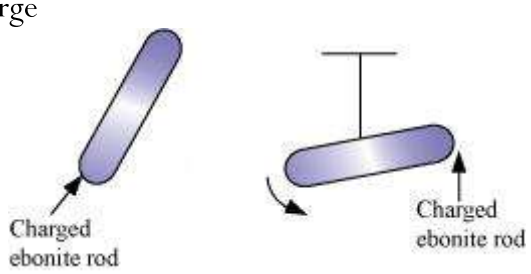
Objects that get charged	Material used for rubbing
Refill	Polythene, woollen cloth
Balloon	Polythene, woollen cloth, dry hair
Eraser	Wool
Steel spoon	Polythene, woollen cloth
Ebonite comb	Dry hair, silk cloth
Glass rod	Woollen cloth, silk cloth

- Rubbing induces electrical charge.

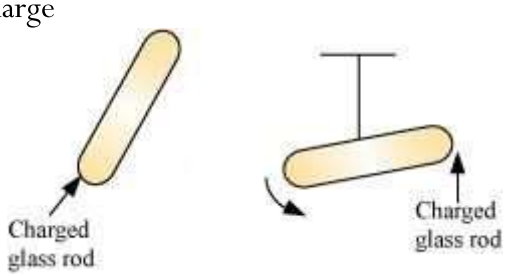
Static Electricity– The property because of which two materials of suitable combination get electrified when rubbed together.

Where, glass rod is positively (+) charged and ebonite rod is negatively (–) charged

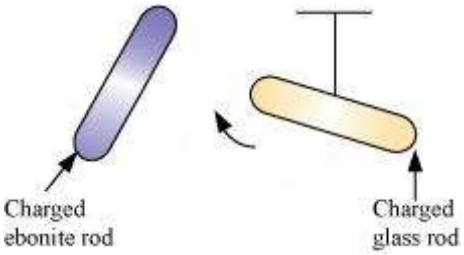
- Positive charge repels positive charge



- Negative charge attracts positive charge



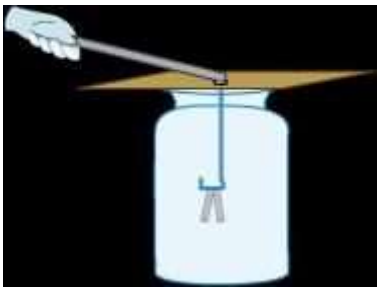
- Negative charge repels negative charge



- Charges are of two type:
  - Positive charge
  - Negative charge

- Like charges repel each other.
- Opposite charges attract each other.
- Charge generated by rubbing is static-charge.

- Electroscope is used to detect whether an object is charged or not.
- A simple electroscope



- It cannot detect the nature of charge.

- Pith-ball electroscope and the gold-leaf electroscope are two classical types of electroscopes.

- The static charge in the clouds is the cause of lightning.
- Generally lower portion of clouds get negatively charged and positive charge is induced on the objects below the cloud.
- When a huge amount of charge builds up, the insulating property of air breaks down which results in discharging of charge to the earth surface.
- The electrical discharge that causes lightning may take place between two clouds or between a cloud and the Earth.