



# BATTERIES





## BATTERIES



Battery is a device that stores chemical energy and releases it as electrical energy. Hence a device which converts chemical energy into electrical energy is called battery, cell, or storage battery.

### **DEFINITION:**

A battery is an electrochemical cell which is often connected in series in electrical devices as a source of direct electric current.

### **A CELL:**

A cell contains one anode and one cathode.

### **A BATTERY:**

A battery contains several anode and cathode.

### **CHARACTERISTIC:**

It should be light in weight.

It must be very compact for easy transport.

It should be easily transport.

It should be reusable.



## CLASSIFICATION OF BATTERIES

### 1. Primary battery or primary cell:

In these cells, the electrode and the cell reaction is not reversible. Thus, once the chemical reaction takes place to release the electrical energy, the cell gets exhausted. They are use and throw type.

*Example: Dry cell, Mercury cell etc.*





## CLASSIFICATION OF BATTERIES

### 2.Secondary Battery or secondary cell:

In these cells, the electrode and the cell reaction is reversible. They are rechargeable cells. Once the battery gets exhausted, it can be recharged. These are also called storage cells (or) Accumulators.

*Example: Nickel-Cadmium cell, Lead-acid cell (storage cell), etc*





## CLASSIFICATION OF BATTERIES



### 3. FLOW BATTERY (or) FUEL CELLS

In these cells, the reactants, products and electrolytes are continuously passing through the cell. Here chemical energy gets converted into electrical energy.

*Example: Hydrogen-oxygen cell.*