Primary and Secondary Cells

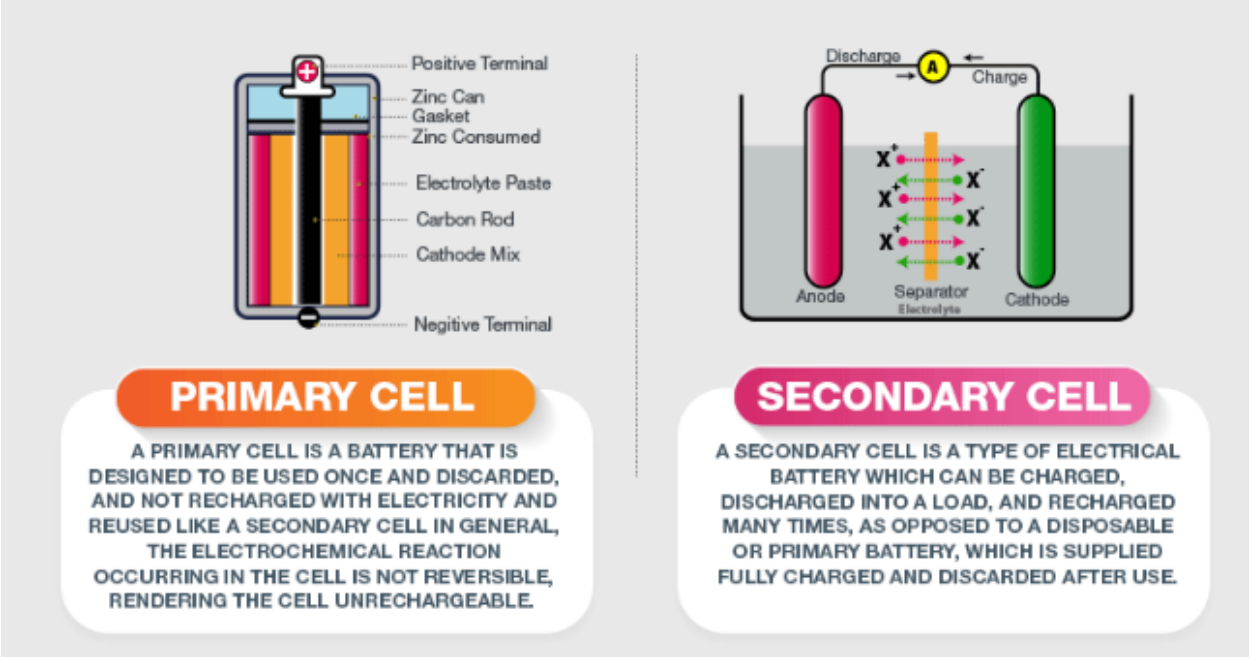
Battery or cells are referred to as the parallel combination of electrochemical cells. The major difference between a primary cell and the secondary cell is that primary cells are the ones that cannot be charged but secondary cells are the ones that are rechargeable.

Primary cell

Primary cells have high density and get discharged slowly. Since there is no fluid inside these cells they are also known as dry cells. The internal resistance is high and the chemical reaction is irreversible. Its initial cost is cheap and also primary cells are easy to use. **Example: Alkaline batteries.**

Secondary cell

Secondary cells have low energy density and are made of molten salts and wet cells. The internal resistance is low and the chemical reaction is reversible. Its initial cost is high and is a little complicated to use when compared to the primary cell. **Example: Lithium-ion batteries.**



Difference Between Primary Cell and Secondary Cell

Primary cells are the ones which cannot be recharged and have to be discarded after the expiration of the lifetime whereas, secondary cells need to be recharged when the charge gets

over. Both the types of battery are used extensively in various appliances and these cells differ in size and material used in them.

Primary Cell	Secondary Cell
Have high energy density and slow in discharge and easy to use	They are smaller energy density
There are no fluids in the cells hence it is also called as dry cells	There are made up of wet cells (flooded and liquid cells) and molten salt (liquid cells with different composition)
It has high internal resistance	It has a low internal resistance
It has an irreversible chemical reaction	It has a reversible chemical reaction
Its design is smaller and lighter	Its design is more complex and heavier
Its initial cost is cheap	Its initial cost is high