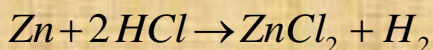


Chapter 4

METALS & NON-METALS

Reaction with acids:

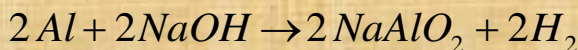
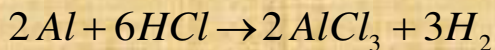
- Generally, metals react with dilute acids and releases hydrogen gas. This gas when passed through a soap solution forms air bubbles. When burning matchstick is placed near the air bubble, it burns with 'Pop' sound. Air bubbles and pop sound indicates release of H_2 gas.
- Reaction of metals with dilute acids also depends on the reactivity of the metals.
- Zinc metal reacts with dilute hydrochloric and, but copper metal does not react with dilute hydrochloric acid.



- Copper metal reacts with sulphuric acid on heating.

Reaction with bases:

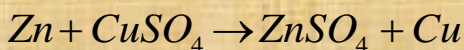
- Some of the metals react with bases and releases hydrogen gas.
- Metals that react with both acids and bases to release hydrogen gas are called as amphoteric metals.



- Metals like Aluminium and zinc are amphoteric metals.

Displacement reactions:

- The displacement of a metal from its salt by another metal is called as displacement reaction.
- More reactive metals displaces less reactive metals from their salts.
- Less reactive metals cannot displace more reactive metals.



- From the above reactions, it is evident that, zinc is more reactive metal than copper.

Order of reactivity of some of the metals:

Potassium (K) > Sodium (Na) > Barium (Ba) > Calcium (Ca) > Magnesium (Mg) > Aluminium (Al) > Zinc (Zn) > Iron (Fe) > Nickel (Ni) > Tin (Sn) > Lead (Pb) > Copper (Cu) > Mercury (Hg) > Silver (Ag) > Gold (Au) > Platinum (Pt).