

## What are Metals?

A metal (from Greek Word 'métallon') is a material that, when freshly prepared, polished, or fractured, shows a lustrous appearance, and conducts electricity and heat relatively well. Metals are typically malleable (they can be hammered into thin sheets) or ductile (can be drawn into wires). A metal may be a chemical element such as iron; an alloy such as stainless steel; or a molecular compound such as polymeric sulphur nitride.

## What are Non-metals?

In chemistry, a non-metal (or non-metal) is a chemical element which usually gains or shares electrons in chemical reactions. Typical non-metals have a dull appearance, relatively low melting points, boiling points, and densities, and are poor conductors of heat and electricity. Chemically, non-metals tend to have higher values of ionization energy, electron affinity, and electronegativity, and their oxides are acidic. Most or some non-metals share a range of other properties; a few have properties that are anomalous.

## USES OF METALS

1. Copper and aluminium metals are used in the making of electric wires, as they have very low electrical resistance and good electric conductivity.



2. Iron, copper and aluminium metals are used in the making of house-hold utensils and factory equipment.



3. Iron is used as a catalyst in the preparation of ammonia gas by Haber's process.



4. Zinc is used for galvanizing iron to protect it from rusting.



5. Chromium and nickel metals are used for electroplating and in the manufacture of stainless steel.



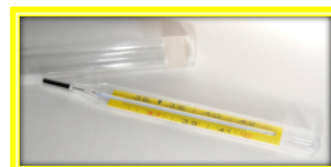
6. The aluminium foils are used in packaging medicines, food materials.



7. Silver and gold are used to make jewellery, coins. The thin foils made of silver and gold are used to decorate sweets.



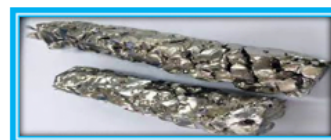
**8. The mercury is used in the making of thermometers.**



**9. Sodium, titanium and zirconium are used in atomic energy that is nuclear energy and space science projects.**



**10. Zirconium is used in making bullet-proof alloy steels.**

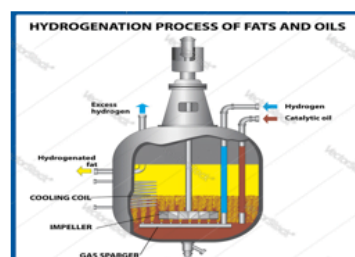


**11. Lead is used in making car batteries.**



## USES OF NON-METALS

**1. Hydrogen is used in the hydrogenation of vegetable oils to make vegetable ghee**



**2. Hydrogen is used in the manufacture of ammonia, whose compounds are used as fertilisers.**



**3. Liquid hydrogen is used as a rocket fuel.**



4. Carbon in the form of graphite is used for making the electrodes of electrolytic cells and dry cells.



5. Nitrogen is used in the manufacture of ammonia, nitric acid and fertilisers.



6. Nitrogen is used to preserve food materials.



7. Compounds of nitrogen like Tri Nitro Toluene (TNT) and nitroglycerine are used as explosives.



8. Sulphur is used for manufacturing sulphuric acid.



9. Sulphur is used as a fungicide and in making gun powder.



10. Sulphur is used in the vulcanization of rubber.



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## Uses of Metal & Non-metal

