

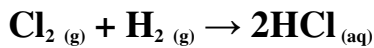
Ixom Botany CAP - Product Plants

- Hydrochloric Acid Production
- Sodium Hypochlorite Production
- Ferric Chloride Production

Hydrochloric Acid Production

The hydrochloric acid plant manufactures 33%w/w acid. The hydrogen produced during chlorine manufacturing is used for synthesis of hydrochloric acid.

Hydrochloric acid is produced by burning hydrogen and chlorine to form hydrogen chloride, which is immediately absorbed in water. The reaction in the burner is:



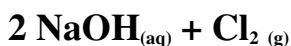
The hydrogen flow to the burner is 20% above stoichiometric requirements to ensure that all the chlorine is reacted. Excess hydrogen is vented to the atmosphere.

Hydrochloric acid is stored in 8 x 100 m3 capacity tanks prior to dispatch in bulk liquid road tankers with primary end users being the steel and food industries.

Sodium Hypochlorite Production

The current sodium hypochlorite plant was commissioned in August 2010, replacing the previous plant which was nearing end of life with a modern continuous production process.

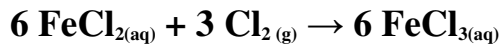
The reaction is as follows:



The main use of sodium hypochlorite is in bacteriological control applications such as swimming pool water quality control.

Ferric Chloride Production

In addition to chlorine, the ferric chloride production process requires elemental iron. The reactions are as follows:



Iron and chlorine can be partially substituted with ferrous chloride (known as pickle liquor) produced as a by-product in steel manufacturing. The main end user of ferric chloride is Sydney Water with ferric chloride being used in waste water treatment and handling.