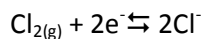


Non-metal/ Non-metal Half Cells

Non-metals can be included in the electrochemical series as oxidising and reducing agents have their standard electrode potentials measured.

Systems Involving Gases



Equilibrium is written with the electrons on the left, the chlorine gas appears on the left, rather than the right where the metals appeared.

To build this equilibrium into a circuit the chlorine gas is bubbled over a platinum electrode, which is immersed in a solution of 1 mol dm^{-3} chloride ions.



$$E^\ominus = +1.36 \text{ v}$$

The $E^\ominus$ value is positive and quite high as the Cl_2/Cl^- equilibrium lies to right of the equilibrium. Chlorine is therefore a good (Best) oxidising agent as it is quite good at removing electrons from other things.

A Gas Electrode Diagram

Replace hydrogen with chlorine gas and chloride ions as the gas electrode may be used for hydrogen also.

