

Cambridge IGCSE Chemistry

Topic 9: The Periodic Table

Noble gases

Notes





Describe the noble gases, in Group VIII or 0, as being...

- Unreactive, monatomic gases (exist as He rather than He₂)
- They have 8 electrons in their outer shell (except helium, which has 2).
- They are unreactive and do not easily form molecules, because they have full outer shells, meaning they have a stable arrangement of electrons.

A periodic table with the noble gases (He, Ne, Ar, Kr, Xe, Rn) highlighted in red. The noble gases are located in Group 0 (Group VIII) of the periodic table. A legend at the bottom left indicates that the red color represents noble gases.

State the uses of the noble gases in providing an inert atmosphere, i.e. argon in lamps, helium for filling balloons

- Helium- filling balloons: less dense than air so the balloons float and He is non-flammable
- Neon – advertising signs
- argon/krypton/xenon- gas in filament lamps: inert
- argon- shielding gas in welding: denser than air so keeps air off of metal and inert so metal won't oxidise

