

Chemical Change and Chemical Bond

Chapter 13: Chemical Change and Chemical Bond · Topic 1

Key Concept

A chemical change involves a chemical reaction that produces new substances with different properties than the original materials.

Signs of chemical change include colour change, gas production, temperature change, and precipitate formation (solid forming from liquids).

Chemical bonds, like ionic and covalent bonds, hold atoms together in compounds, formed through the sharing or transfer of electrons.

Understanding chemical changes and bonds helps explain how substances react and combine to form the materials we use every day.

Quick Revision Notes

- Chemical change: reaction produces new substances.
- New substances have different properties.
- Signs: colour change, gas, temperature, precipitate.
- Chemical bonds: ionic, covalent bonds.
- They hold atoms together in compounds.
- Formed via electron sharing or transfer.
- Understanding this explains reactions.
- It explains everyday material formation.

Practice Questions

- 1 Observe a chemical change (like rusting or burning) and note signs.
- 2 Discuss the difference between physical and chemical change.
- 3 Draw a diagram of an ionic bond forming.
- 4 Draw a diagram of a covalent bond forming.
- 5 Research an everyday chemical reaction.
- 6 Explain chemical bonds in your own words.