



# CAIE Chemistry A-level

## 20: Polymerisation

### Definitions

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## Definitions and Concepts for CAIE Chemistry A-level Polymerisation

**Addition polymerisation:** The formation of a long chain molecule when many monomers join together (the polymer is the only product).

**Biodegradable:** A substance that can be broken down by bacteria or another living organism.

**Biodegradable polymer:** A polymer that can be decomposed by bacteria or other living organisms.

**Combustion:** A reaction in which the carbon and hydrogen within fuels are oxidised to release energy and to produce carbon dioxide and water. Polymers require lots of energy to combust and often release harmful substances.

**Monomer:** A small molecule that can react to form polymers.

**Polymer:** A large molecule made from many small monomers that have been bonded together.

**Polymer disposal:** Most polymers are unreactive which means they are not biodegradable (cannot be broken down by microorganisms). This means they are often disposed of in landfills, incinerated (which releases greenhouse gases), or recycled (which is often expensive and takes time).

**Polymerisation:** The process of making a polymer from its monomers. There are two types: addition polymerisation and condensation polymerisation.

**Repeat unit:** A structure within a polymer that appears over and over again. Joining many repeat units together would form the polymer.

