

9.2 Uses of metals

Name: _____ Class: _____ Date: _____

Total: 7 marks**KEY WORDS** aluminium 铝 • density 密度 • corrosion 腐蚀 • uses of metals 金属的用途 • copper 铜

Objective

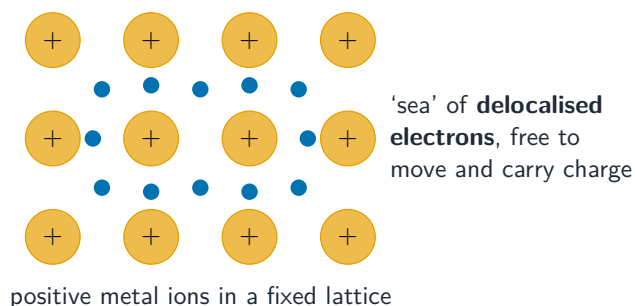
Build the skills to answer exam questions on **uses of metals** 金属的用途 — choosing a metal for a job from its properties.

You must be able to:

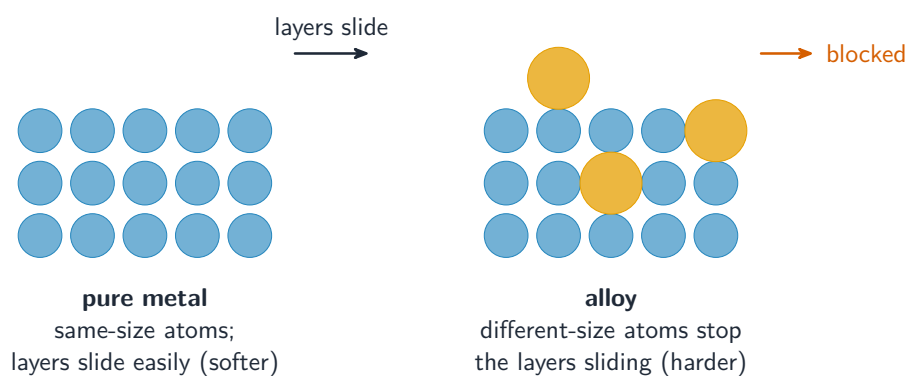
- link a use to the property that makes the metal suitable
- explain the uses of aluminium and copper

1 Worked examples

■ Property → use



A metal is chosen for a job because of its properties



Most metals are used as alloys

- **aluminium** — low density (aircraft); low density + conductivity (overhead cables); resists corrosion (food containers).
- **copper** — good conductor + ductile (electrical wiring).

2 Practice

2.1 State why copper is used for electrical wiring. [1]

2.2 State why aluminium is used to build aircraft. [1]

3 Exam-style questions

3.1 Aluminium is used for overhead power cables mainly because it is: [1]

- **A** very dense
 - **B** low density and a good conductor
 - **C** magnetic
 - **D** very reactive
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3.2 A metal is needed for food and drink cans.

(a) Name a suitable metal. [1]

(b) State the property that makes it suitable. [1]

3.3 Explain why copper, rather than aluminium, is normally chosen for the wiring inside a house. [2]

Solutions

2.1 it is a good electrical conductor (and ductile).

2.2 it has a low density (it is light).

3.1 B. Low density and good conductivity suit overhead cables.

3.2 (a) aluminium.

(b) it resists corrosion.

3.3 copper is a better electrical conductor than aluminium; and it is ductile, so it can be drawn into wires.