

# CAIE IGCSE Chemistry

## 9.2 Uses of metals

### Notes

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*Describe the uses of metals in terms of their physical properties, including:*

- Metals have the following physical properties:
  - Good conductors of electricity (and heat)
  - Malleability and ductility
  - Some are very shiny, have low density or are resistant to corrosion
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- Metals have a variety of uses, due to their physical properties, such as:

(a) Aluminium in the manufacture of aircraft because of its low density

- Aluminium has low density due to its lightweight atoms, making it an ideal material for manufacturing aircraft structures as it is lightweight and easy to manoeuvre

(b) Aluminium in the manufacture of overhead electrical cables because of its low density and good electrical conductivity

- Low density- aluminium is lightweight and easy to move around
- Good electrical conductivity- delocalised electrons are free to move around and carry charge

(c) Aluminium in food containers because of its resistance to corrosion

- Resistant to corrosion- forms an aluminium oxide layer to reduce further oxidation

(d) Copper in electrical wiring because of its good electrical conductivity and ductility

- Good electrical conductivity- delocalised electrons are free to move around and carry charge
- Ductility- able to be stretched and drawn out through a wire without breaking

