

Answers and marking guidance

Award one mark per correct, developed point unless stated. Other valid answers should be credited.

2 Explain why an elastomer is suitable for the strap and seal.

- Flexible so the seal fits different face shapes
- Soft and comfortable against the skin
- Stretches so the strap adjusts to head size
- Seals tightly against the face to keep water out

No marks for: "Waterproof" on its own; "Available in colours"

3 Quick check

- a) Acrylic
- b) It is self-lubricating and wear resistant
- c) Polypropylene
- d) Urea formaldehyde

4 Key terms

- 1 – B
- 2 – A
- 3 – E
- 4 – C
- 5 – F
- 6 – D

5 Explain why polypropylene is suitable for a box with a living hinge.

- Resists fatigue, so the hinge can be bent many times without breaking
- Tough, so it withstands knocks
- Lightweight

No marks for: "Flexible" on its own

6 Describe methods that could be used to identify the materials used in a product.

- Magnet test: ferrous metals are attracted
- Float test: most plastics (e.g. polypropylene) float, metals sink
- Flame test: describe the result, e.g. colour of flame or smell of smoke
- Identification symbols and recycling codes moulded into the part
- Scratch or cut test: plastics cut into slivers, thermosets chip
- Look and grain pattern for woods; comparison with known samples

No marks for: Naming a method only; Flame test with no result described