Your notes

GCSE Design and Technology: revision notes

Surface treatments and finishes

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Why finish products

- Surface treatments and finishes protect materials from damage, corrosion, rot and wear, and improve how products look and feel.

Finishes for each material

- Papers and boards: printing, **embossing** (raised areas), UV varnishing (glossy highlights) and laminating (a thin plastic layer for protection).
- Timbers: painting, varnishing, oiling, staining and waxing. **Tanalising** (pressure-treating with preservative) protects outdoor timber from rot and insects.
- Metals: painting, **dip coating** (dipping in melted plastic, as on tool handles), **powder coating** (a tough, even finish), **galvanising** (coating steel in zinc to stop rust) and anodising (for aluminium).
- Polymers: most are **self-finishing**, because the mould gives a smooth finish; they can also be polished or printed.
- Textiles: printing and dyeing add colour; stain-resistant and waterproof treatments protect fabrics; flame retardants improve safety.

Choosing a finish

- Match the finish to where the product will be used, such as **galvanising** an outdoor gate and varnishing an indoor table.
- Consider the look, cost, durability and safety, such as food-safe oil on a chopping board.

Key terms

Galvanising	Coating steel with zinc to stop it rusting.
Powder coating	Spraying a powder that is heated to form a tough, even coat.
Dip coating	Dipping hot metal in plastic powder to form a coating.

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Tanalising	Pressure-treating timber with preservative.
Embossing	Pressing a design so it stands out from paper or board.
Self-finishing	Needing no extra finish, as with most moulded plastics.
Anodising	A treatment that thickens the protective oxide layer on aluminium.

Your notes

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What does galvanising do to steel?
2. Which finish would protect an outdoor fence from rot?
3. What is embossing?
4. Why are most plastics described as self-finishing?
5. Which finish gives a tool handle a soft plastic grip?
6. What is a benefit of powder coating?
7. Which finish might be used on a chopping board?
8. What does UV varnishing add to printed board?

Answers

1. Coats it with zinc to stop rust
2. Tanalising
3. Pressing a design so it stands out from the surface
4. The mould gives them a smooth finish
5. Dip coating
6. A tough, even finish
7. Food-safe oil
8. Glossy highlights and protection

What to do next

Practise 10 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

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