Textiles

Natural Fibres:

Cotton:

Advantages	*Disadvantages*
• Hard wearing • Easy to upkeep • Versatile • Breathable	• Creases easily • Absorbent (long time to dry) • Highly flammable

Uses: Curtains, Cushions, Clothing, Knitting yarns

Linen:

Advantages	*Disadvantages*
• Strong • Comfortable • Dyes and prints well • Durable • Withstands heat	• Creases easily • Shrinks • Can be expensive

Uses: Tea towels, bed sheets, table cloths, clothes

Wool:

Advantages	*Disadvantages*
• Warm • Lightweight • Crease resistant • Dyes well • Recyclable	• Shrinks with heat/moisture • Needs special treatment (dry cleaning) • Weakens when wet

Uses: Clothing, Rugs, Hats, Scarfs

Manmade Fibres:

Nylon:

Advantages	*Disadvantages*
• Tough • Strong • High temperature resistance • Good solvent resistance	• Shrinks easily • Prone to UV degradation • Moisture leads to weakness of material

Uses: Clothing, Cookware, Plastic components

*Nylon 6 is produced through chemical reaction, nylon 6.6 is a single compound

Polypropylene fibres:

Advantages	*Disadvantages*
• Mixes with materials to improve strength (concrete) • Heat resistant • No static electricity created • Can be stretch without deformation	• UV light causes degradation

Uses: Used in concrete for added strength, Carpets, Carpet backing, gloves

Polyester fibres:

Advantages	*Disadvantages*
• Strong • Flexible • Dries quickly • Cheap • Easy to dye	• Not very breathable • Temperature sensitive • Subject to dye migration

Uses: Conveyor belts, safety belts, Car tire reinforcement

Textile treatments:

Flame resistant:

Advantages	*Disadvantages*
• Resistant to fire/heat • Can withstand high temperatures	• Can be toxic • Can emit harmful chemicals

Uses: Cladding, Clothing, Padding

Polytetrafluoroethylene (PTFE):

Advantages	*Disadvantages*
• Electrical resistant • Chemical resistant • Non-stick • Flexible •	• Not very durable • Toxic fumes van be emitted when overheated •

Uses: Coatings for cooking pans, reduce friction on cutting tools