

2.3.3c Blended and mixed fibres

Staple and filament fibres

All natural fibres are staple fibres, except silk.

All manufactured fibres are filament fibres.

- Staple: short fibres
- Filament: long, continuous length.

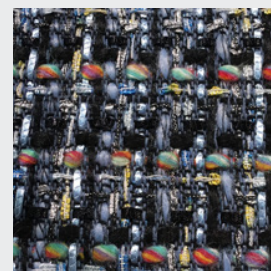
Yarns

A yarn is created by twisting staple or filament fibres together to create a single yarn.

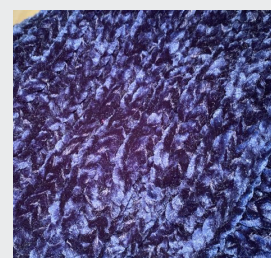
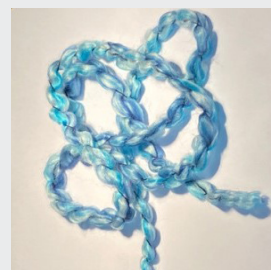
- Staple yarns consist of staple fibres that are twisted together to form a yarn.
- Filament yarns are made by twisting one or more filament fibres together.
- A mono filament yarn is made from a **single** continuous filament.
- A multi filament yarn is made by twisting **many** continuous filament fibres together.
- Filament yarns are smooth and therefore they are ineffective insulators.
- Staple yarns are hairy, which means they are good at trapping air making them effective insulators.
- The number of twists in a yarn affects the strength, appearance and handle of the resultant fabric.
- A tighter twist adds strength.
- Yarns are twisted in two directions – S or Z.
- Filament yarns can be changed by adding crinkles and crimps which alter their characteristics. As they are no longer smooth, air can become trapped thus improving insulation.

Fancy and novelty yarns

- Fancy yarns add interest and texture to fabrics.
- Made from any fibre in either staple or filament forms.
- Fancy yarns consist of three parts: a fancy thread (for example, with loops that twist around a base thread, a third thread ties these together).
- Bouclé is a fancy yarn and is also the name of the resultant fabric.
- Bouclé comes from the French word for curly, which is an apt description for this yarn.
- Slub yarn is created by varying the thickness of the yarn during spinning. This adds an interesting texture to fabric.
- Chenille yarn is soft and fluffy with fibres sticking out from a central core. Fabrics made from chenille are very soft and warm to wear.
- Metallic yarns are used to create shiny and iridescent fabrics such as lamé.



These are two examples of woven fabric made from different fancy yarns of varying thicknesses, colours and textures that create an interesting overall effect.



Chenille yarn has a soft fluffy texture, making it soft and warm to wear. 'Chenille' comes from the French word for caterpillar which the yarn is said to resemble.

Blended and mixed fibres

- Fibres are blended together during spinning to combine the **best properties of both fibres**. This extends the suitability of fabrics to a wider range of uses.
- Most modern fabrics include fibre blends.
- A mixture refers to different fibres being used in the construction of a fabric, for example where the warp and weft yarns are different fibres.
- Popular blends and mixes include polyester and cotton, silk and viscose, wool and acrylic.

Reasons for blends and mixes include:

- reducing the cost
- aesthetics – better appearance – colour, texture, tone
- functionality – better handle or draping qualities
- easier to care for.

Core spun yarns

- These are multi component yarns where one yarn, usually at the centre, is covered by a different yarn.
- Stretch yarns such as Elastane and Lycra® are made in this way.

