

DIFFERENT TYPES OF WOOL FABRICS



Wool is a versatile natural fibre, which can be made into a wide range of fabrics with many different uses.

Depending on the length and **fibre diameter** (fineness) of a **fleece**, wool is processed through either the **woollen** or **worsted processing** system.

After processing, woollen **yarn** can be either woven or knitted to produce fabric ready to be made into a garment or upholstery item (for example, curtains or furniture coverings).

Woven and knitted fabrics have unique properties that make them suitable to different end products.

Knitted fabrics tend to stretch more than woven fabrics, making them more suitable for garments such as t-shirts, activewear and babywear. Woven fabrics are often used to produce more formal garments such as suiting or tailored jackets.

Worsted-spun woven fabrics

The **worsted processing** system uses the highest-quality fleeces to produce very fine **yarns**, which can be woven to make extremely smooth, lightweight and expensive fabrics.

These luxury fabrics are used by fine tailors around the world for clothes such as business suits, trousers and skirts.

Worsted-spun woven fabrics are ideal to wear in warm weather or indoors, where they keep you cool and comfortable.

Fast facts

- Wool is a versatile **natural fibre** that can be used to make garments as diverse as business suits, knitted jumper, sportswear or babywear.
- Fine Merino wool produces lightweight woven or knitted fabrics that are easy-care, soft touch, cool and comfortable.
- Innovative technologies can be introduced during processing to produce fabrics with specialist features for specific end uses.



Worsted-spun knitted fabrics

Fine worsted-spun **yarns** produce super-soft knitted fabrics with a very smooth surface appearance and texture, and a clear definition of the knitted stitches.

These fabrics are incredibly versatile — they are used for babywear, underwear, t-shirts and sportswear, leggings, dresses and other lightweight knitwear.

Worsted-spun knitted fabrics are ideal for wearing every day — they are soft and comfortable, great for travelling, lightweight and don't need ironing.

Woollen-spun woven fabrics

Fleeces processed through the **woollen system** generally produce



Worsted-spun woven: Tailors around the world pay premium prices for Australian Merino worsted-spun fabrics, which are made into high-end business suits.

Did you know?

- An innovative dyeing process can be applied to Merino fabrics to give them a 'vintage' look, without the common issues of loss of colour fastness experienced by other fabrics.

bulkier yarn than those used in the worsted-spun system, making them suitable for thick heavyweight woven fabrics. These fabrics are ideal for warm winter jackets and coats.

Woollen-spun woven fabrics are generally windproof and can repel light rain, so are suitable to wear as an outer layer when outdoors during cold weather.



Worsted-spun knitted: Fine Merino wool is ideal for next-to-skin garments such as babywear, because it is super-soft and comfortable.

Woollen-spun knitted fabrics

Knitted fabrics made from fleeces that have been processed through the **woollen system** are generally heavier and bulkier than worsted-spun knitted fabrics. These types of knitwear fabrics

are characterised by having a slightly raised and fuzzy surface appearance.

Woollen-spun knitted fabrics make great soft, warm jumpers, scarves, beanies, socks and cardigans ideal for keeping you warm in cooler weather.

Wool innovations

Mercerised Merino

Mercerisation involves applying a chemical to the wool before spinning to remove the scale structure from the surface of the wool fibre.

A very fine layer of silicone polymer is then grafted onto the fibres' surface.

While the **micron** stays the same, the fabric feels as if it is made using wool 2–3 microns finer and has a greater sheen.

The process also improves the drape, fluidity and comfort especially in next to skin products.

Machine wash and tumble dry

Like mercerisation, the machine wash and tumble dry technology involves treating the wool with a chemical and later applying a polymer, which swells during washing and masks the scale edges responsible for felting.

For fine gauge knitted garments, which are generally made from worsted-spun yarns, the treatment is often applied before spinning.

For woollen-spun products, such as lambswool sweaters, the treatment is normally applied to the knitted garment during the final wet-finishing process.

OPTIM technology

Fabric incorporating OPTIM technology is made from 100 per cent Merino wool and possesses, in addition to Merino wool's inherent attributes, enhanced shower resistance, wind-resistance, wrinkle-recovery and machine-washability. This makes it an ideal fabric for use in garments for sports and outdoor pursuits.

Wool denim — woven fabric

A wool-cotton denim blend uses the same warp yarn as traditional denim, but replaces some, or all, of the weft yarns with machine-washable wool.

The fabrics are finished the same as traditional denim, so style isn't compromised, and all the natural benefits associated with wool are maintained.

Wool denim — knitwear

Innovative dyeing systems for cotton and wool mean it is feasible to create denim-like wool yarns which, when knitted into denim jersey structures, can create knitted denim looks in pure wool or wool/cotton blends.



Wool denim: Denim is probably the most popular trousering fabric in the world because of its value for money and relaxed appearance.

Glossary

Fibre diameter — the thickness of a single wool fibre.

Fleece — the wool that covers the body of a sheep, usually removed by shearing.

Micron — a millionth of a metre and the unit of measurement used to describe wool fibre diameter.

Natural fibre — a fibre sourced from a plant or animal, not manufactured in laboratories (synthetic fibre).

Scoured wool — greasy (raw) wool that has been cleaned to remove any dirt, lanolin (grease) and vegetable matter (plant material).

Woollen processing — uses shorter fibres, less stages and produces a thicker yarn than worsted processing.

Worsted processing — uses longer fibres, more stages and produces a finer, high-quality yarn than woollen processing.

Yarn — fibres of wool twisted together to form a rope-like thread ready for knitting or weaving.

More information

To find out more about wool fabrics take a look at:

- learnaboutwool.com
- Beyond the Bale: beyondthebale.wool.com
- woolmarklearningcentre.com
- The posters, fibre, yarn and fabric samples that came with the Learn About Wool Kit.

