Inside a wool fibre

Structure of a wool fibre

- Epicuticle
- Exocuticle
- Endocuticle
- Cuticle
- Protofibrils
- Microfibril
- Helix of long chain amino acids
- Macrofibril
- Cortex
Inside a wool fibre

Not all wool is the same — it varies in colour, quality (fibre diameter) and length.

Fibre diameter and staple length are important measurements that determine the use of wool. Diameter is measured in microns and fibre length is always recorded in millimetres.

Wool can be divided into three main groups based on micron: fine, medium and broad.

Fine — Merino sheep produce the finest wool, which is used for high-quality, soft fabrics and yarns by leading fashion designers.

Medium — Medium wools are used in a variety of woven apparel clothes, knitting yarns and furnishings. Medium wools are often produced by crossbred sheep.

Broad — Many different sheep breeds produce broader wools and often they are dual-purpose breeds used to produce both meat and wool.

‚ Wool is natural, biodegradable, renewable and safe for the environment.
‚ Wool keeps you warm in winter and cool in summer.
‚ Australian Merino wool is used by fashion designers all around the world.
‚ Merino is a breed of sheep developed to produce lots of high-quality fine wool.
‚ Wool contains a natural grease called lanolin, which is used in make-up and skin products.

Glossary

Crossbred — an animal whose parents were of two different breeds. For example, Merino and Border Leicester.

Dual-purpose — breeds of sheep used to produce both wool and meat.

Fibre diameter — the thickness of a single wool fibre.

Micron — one thousandth of a millimetre.

Staple length — the distance from one end of a tuft of wool to the other.

Fun facts about wool

• Wool fibres grow in tufts (staples) on the sheep’s back with crimps (waves).
• Human hair has an average diameter of about 65 microns — more than four times as thick as ultrafine wool.

<table>
<thead>
<tr>
<th>Merino wool micron grades</th>
<th>Micron Range</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>14.5 and finer</td>
<td>Extrafine</td>
<td></td>
</tr>
<tr>
<td>14.6 – 16.5</td>
<td>Ultratine</td>
<td></td>
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<tr>
<td>16.6 – 18.5</td>
<td>Superfine</td>
<td></td>
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<tr>
<td>18.6 – 20.5</td>
<td>Fine</td>
<td></td>
</tr>
<tr>
<td>20.6 – 22.5</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>&gt;22.6</td>
<td>Broad</td>
<td></td>
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</tbody>
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More information

To find out more about wool, take a look at:
• learnaboutwool.com
• Beyond the Bale magazine: beyondthebale.wool.com