

## WHY DOES FADE AWAY WORK DIFFERENTLY TO OTHER WOOL SPRAY IDENTIFICATION MARKERS?

## Understanding the properties of wool

Dry wool will absorb up to 30% of its own weight of moisture. Because of its chemical structure wool absorbs dye readily, the dye accessibly is due to the abundance of the orthocortex (Inner fibre structure) material which absorbs dyes between the macrofibrils of the

orthocortex.

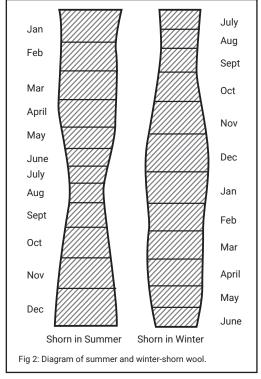
Wool is made up of the protein Keratin which contains, carbon, oxygen, nitrogen, hydrogen and sulphur in bonds and having a high nitrogen to oxygen ratio in its chemical structure.

The outside layer of wool fibres (the fibre cuticle) has ridges which form scale patterns. These patterns are formed at an early stage of fibre growth and are the imprint of neighboring cells. The scales cause wool to repel large beads of liquid but also to be porous to water vapour, allowing it to hold a high amount of moisture. Tender wool has a higher proportion of orthocortex than sound wool of the same diameter, this variation indicates a genetic difference between some sheep.

There is a difference in the fibre diameter between sheep shorn in summer to those shorn in winter (refer diagram Fig 2).

Wool has a high nitrogen to oxygen ratio in tis chemical structure.

Fadeaway contains an ingredient to reduce dye penetration into the wool's inner fibre. This ingredient offers protection properties so the wool fibre on one hand repels the Fadeaway application while allowing it to settle on the top of the outer fibre and keep the integrity of the products visibility.



## AVAILABLE IN 5 DIFFERENT COLOURS



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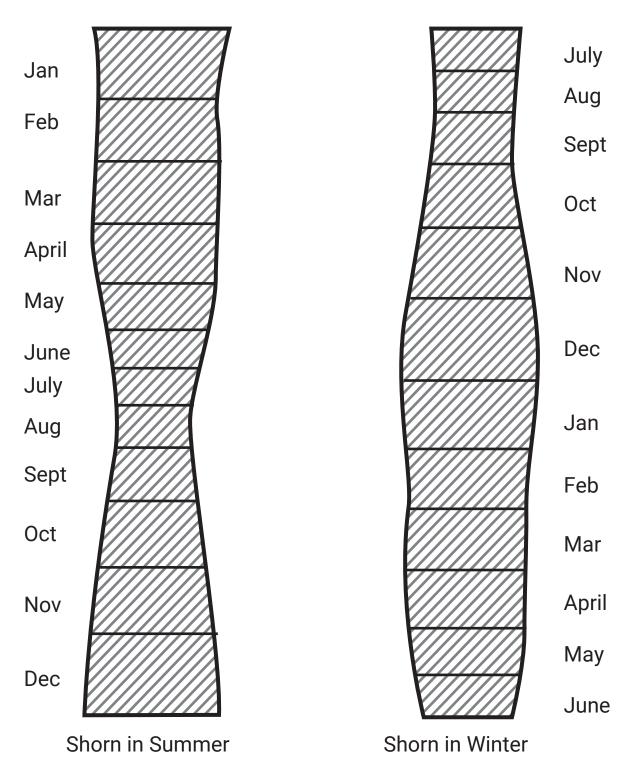


Fig 2: Diagram of summer and winter-shorn wool.