

XD1900 – Extra Density, Extra Benefits

What is XD1900?

Healthcare Innovations Australia (HIA), following years of research, has brought XD1900 to the market. XD1900 is an extra high density woven wool material specially developed for skin and pressure care.

Medical grade sheepskin has been proven to reduce the occurrence of pressure ulcers (see p10), but HIA wanted to go one step further and improve upon what nature could produce. Sheepskins are natural products, but Nature is variable. Natural sheepskin wool density varies from animal to animal, and can range from 800 to 1200 grams per square metre (GSM).

Our proprietary manufacturing techniques are able to take natural wool, and weave it into a density of 1900 GSM. Thereby we boosted the already impressive capabilities of natural sheep skin, and are able to manufacture a product that is consistent from batch to batch, and across the whole surface area. We can manufacture overlays up to the width of a bed without the need to join sections together, with less wastage and therefore cost savings for our customers. An additional benefit is that because we no longer have a leather or skin backing, XD1900 can be washed with standard detergents, for example in an institutional wash, at up to 100°C.

Natural vs Synthetic

XD1900 uses natural wool and a manufacturing process to achieve the extra density. It is the natural properties of wool that provide the protective and therapeutic benefits of our overlays.

- Polyester and other artificial fibres were brought to the market because of their ease of washing at high temperatures, but they do not provide the resilience of wool fibres, and are easily compressed, thus having minimal pressure redistribution properties.
- They are also hydrophobic, so cannot provide the moisture absorbing properties of wool.
- Their compressibility squeezes out trapped air, losing the temperature regulatory properties of the natural materials.
- Wool processing techniques have improved in the meantime, meaning that many wool based products such as XD1900 can be washed at or above 80°C.

In summary, 'synthetic wool' products provide none of the benefits of natural wool products.



Density

Accepting that wool is a more beneficial material than synthetics, the density of the wool fibres in an overlay is still very important to ensure the therapeutic properties of the sheepskin. Lower densities compress too easily, removing the pressure redistribution, shear reduction, and temperature/moisture regulation properties.

Over the years, low density (under 500 GSM), low cost sheepskins have tarnished the image of natural sheepskins. Indeed these low density products have very limited clinical application. Below you can see the comparison between the pressure distribution properties of a 'high end', but typically lower density woven wool product (700 GSM) and XD1900 (1900 GSM)

