The evolution of performance insulation for apparel
ThermoCool™ performance insulation material is the result of ADVANSA’s extensive experience in developing and manufacturing technical fibres for high-end performance insulation products and special fibres for active sports apparel. Combining the two technologies, ADVANSA in partnership with Hong Kong Non-Woven have developed a new revolutionary insulation concept for thermal apparel and accessories.

ThermoCool™ performance insulation has been designed to provide not just maximum warmth, but also a microclimate that reduces the adverse effects of perspiration and condensation, thus enhancing comfort.
HOW DOES IT WORK?

A combination of differently engineered cross-sections enables the product to combat the adverse consequences of perspiration, condensation and humidity inside the garment more effectively while, at the same time, providing outstanding thermal protection. All performance insulation products are designed to be percolation and fibre migration proof.

ADVANSA THERMO°COOL™ FOR A MULTITUDE OF DIFFERENT USES

A range of adapted products is currently being developed to include a range of different innovative performance constructions, designed to offer the correct level of insulation for each different end-use.

We have likewise developed an environment-friendly option, a key part of ADVANSA wider sustainability program, aimed at reducing the environmental impact of all our activities.

The product is delivered in different configurations, to offer the ideal level of insulation and comfort for each different end-use; Active Sportswear, Fashion, soft shell and accessories such as gloves or boots.
PRODUCT RANGE AND BENEFITS

**ThermoCool TECH**

A unique combination on engineered cross-sections of multi-channel and hollow fibers with a particular and unique 3 layer sandwich construction specially designed and developed by Hong Kong Non-Woven, aimed to provide maximum performance and comfort. This combination is perfect for high performance apparel, offering excellent insulation and bulk with its high void fibre. Channeled fibre evacuates condensation enhancing the feeling of comfort and warmth.

**Ref. THC1**

Designed for high performance apparel, it offers excellent insulation and bulk with its high void fibre. The special outer fine channelled fibre transports away moisture to enhance the feeling of comfort and warmth.

**ThermoCool SOFT**

A unique combination of engineered cross-sections of hollow and micro denier fibres, offering soft hand and maximum performance as well as low loft with excellent insulation properties together with condensation management, with no concern on percolation or fibre migration.

**Ref. THC2**

This close-knit blend of micro and high void fibre feels ultra-soft to the touch and combines a low loft with excellent insulation properties. A perfect solution for fashion and high-end technical garments.
**ThermoCool® STRETCH**

A particular structure specially designed by Hong Kong Non-Woven providing mechanical stretch with an excellent abrasion resistance for high activity avoiding appearance of cold spots. Ideal for accessories, such as gloves or boots, or for joint body parts (knees, elbows, shoulders etc...) offering complete freedom of movement.

**Ref. THC3**

Developed specially for gloves, soft-shells and liners, it offers durable low-volume insulation and excellent stretch recovery and insulation properties.

**ThermoCool® ECO**

Ecology and functionality meet with the new range of ECO. Having concern for the environment, products and manufacturing process using neither chemical nor resin in the binding process.

**Ref. THC4**

This close-knit fibre blend feels ultra-soft to the touch with its micro-fibre, high loft and resilience. It contains a unique 3-D crimped recycled mono-polymer fibre and high-void hollow fibre to offer excellent insulation properties.
Adaptive temperature control for garments

We have all experienced these two extreme and contrasting sensations, hot and cold, and their negative aspects on comfort and performance. With the Climarelle™ fibre system we can now provide you warmth when you feel cold and cooling when you feel hot.
**HOW DOES IT WORK?**

Climarelle™ is a soft, high-stretch non-woven product placed between the insulation fibre and the inner liner, close to the body. With its unique properties, if the temperature around the body is higher than it should be, Climarelle™ produces a cooling effect, until it returns the body to its ideal temperature. If body temperature falls to below normal, Climarelle™ releases heat to help the body recover its normal level. Climarelle™ close to the skin provides adaptive temperature control and helps the wearer to keep his/her body temperature within the comfort zone.

**SPECIAL BENEFIT**

EXTENSIBLE

The special design of the Climarelle™ liner is extremely extensible and can be stretched up to 2 times its original size and fully recover. This allows an exceptional adaptation to the movement of the body for garments, gloves, shoes and drapability and compactability for sleeping bags.

**TESTS RESULTS**

**MEASURABLE EFFECTS IN APPAREL: WEAR TEST OF ANORAKS WITH AND WITHOUT CLIMARELLE™ INTERLINING**

Climate chamber tests confirm that the thermo regulating nonwoven fabric compensates variations in body temperature and so helps maintain ideal temperature.

Perceived thermal comfort also depends significantly on humidity levels. After 30 minutes of wearing a Climarelle™ garment the build up of moisture was 40% less than when wearing a standard garment. The thermoregulatory effect of Climarelle™ allows the wearer to remain in the comfort zone longer.
When the garment you choose carries the ADVANSA performance insulation brand labels, you and your customers can be confident you have made the right choice.

To your customers, ThermoCool and Climarelle™ brand names mean quality, consistency and performance.
For the textile industry, it means added value for all your products. And, of course, we provide our own package of unparalleled consumer communications support. Global advertising, retail promotions, top sports sponsorships and public relations activities which helps build brand recognition and drive sales.

With its unique serial number, the ADVANSA label is your reassurance of premium performance.
The garments are made from approved performance insulation that meet the high standard of the certification ADVANSA requires from all manufacturers. Every certified ADVANSA performance insulation is regularly tested to ensure continuing ADVANSA high quality standards.