Outlast presents new filling material

PCM viscose + down = Perfect symbiosis for an optimum sleeping climate

Outlast Technologies, market leader for temperature regulating phase change materials (PCMs), enlarges its product range again and presents the new performance filling material “Universe”: Heat and moisture regulating PCM viscose fibers combine perfectly with cozy downs and offer a natural solution for climate comfort in bedding and apparel products.

The heat managing Outlast® PCM viscose fibers form one part of the new filling material „Universe” (30% viscose Outlast®, 70% down). They are 10 mm short cut fibers with 7 dtex. Such a thick fiber with a high diameter was deliberately selected. “So we can guarantee a high loading of phase change materials (PCMs),” says Martin Bentz, Managing Director of Outlast Europe GmbH, Heidenheim/Germany. “The performance compared to a standard PCM viscose fiber here is four times higher”. In combination with the down, Outlast has developed a product offering optimum thermal comfort. The downs display their advantages like lightness, fluffy volume and naturalness, the Outlast® PCM viscose fibers regulate and optimize the climate comfort. Overheating and sweating are reduced significantly.

What sounds easy was technically a very big challenge. “In conjunction with our well-known partner Kelheim Fibres, we are happy to have successfully obtained this new process - a homogeneous blend where both wash and care requirements are ensured,” continues Martin Bentz.

Thus, Outlast has further tested on “filling material” and found out that PCM filling materials are ideally suited to provide an optimum heat and moisture management. “The air transports body heat quickly to the performance fibers,” explains Volker Schuster, Director R&D at Outlast Europe. “One important aspect is that all fibers inside a filling altogether build a huge surface. And all fibers are flowed around by air. Therefore every fiber can react very quickly to temperature changes. Since the airflow is increased, this allows the PCMs to be more active in loading and discharging”. As a result, temperature changes are minimized and sweating can be reduced significantly.

And Outlast strengthens: The new PCM filling material optimizes the climate proactively - contrary to other technologies that are merely transporting sweat. Outlast® technology is not a wicking technology, which manages moisture by reacting to sweat and pulling it away from the skin. Outlast® technology proactively manages your skin temperature while controlling the production of moisture before it begins. That's the Outlast® difference. And you will feel this difference also in comfort and hygiene.

Interesting side effect: By using the new down/PCM viscose fiber blend the material costs of an end product (in comparison to the use of 100% down) can be reduced while also offering an interesting added value and more performance. This offers a benefit to manufacturers as well as to consumers.
Outlast® technology

Outlast® technology was originally developed for NASA to protect astronauts from temperature fluctuations in space. Outlast® technology utilizes phase change materials (PCM) that absorb, store and release heat for optimal thermal comfort. Outlast® technology is comparable to ice in a drink; as it changes from solid to liquid, it absorbs heat and cools the drink, keeping that drink at the desired temperature for a longer period of time. Outlast® phase change materials work in the same way. The PCMs have the capacity to absorb, store and release excess heat. This gives any product containing Outlast® technology the ability to continually regulate skin's microclimate. As the skin gets hot, the heat is absorbed, and as it cools, that heat is released. The benefits of Outlast® products at a glance:

- Absorbs excess body heat
- Manages moisture
- Reduces overheating
- Reduces chilling
- Reduces perspiration
- Continuously adapts to thermal changes

For more information, come and see Outlast in hall 8.0, stand D 74 at Heimtextil, January 14-17, 2015 in Frankfurt/Germany.

Outlast Technologies LLC, a privately held U.S. corporation, is the worldwide leader in phase change materials and applications. Outlast® technology is the heat management technology originally developed for NASA that enables any textile to absorb, store and release heat. Outlast® technology pro-actively responds to changes in skin temperature to manage heat and reduce moisture for everyday comfort. For over 20 years, Outlast has been committed to the development of new fibers, fabrics and coatings incorporating phase change materials, expanding the use of Outlast® technology across more than 300 brands and a multitude of products in apparel, footwear, bedding, packaging and labels, and accessories. For more information, please visit www.outlast.com.

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458 words
Picture: The Outlast® principle

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Outlast® technology works dynamically and proactively manages heat while controlling the production of moisture before it begins.

Picture 1

Outlast® technology works dynamically and proactively manages heat while controlling the production of moisture before it begins.

Challenge:
Varying environmental temperatures and conditions can upset comfort levels.

Solution:
Outlast® materials absorb, store and release excess body heat to maintain temperature balance.

Result:
A permanent cycle of comfort through regulated temperature.