Outlast presents complete PCM spectrum

What, why, when?

“I would like to incorporate the function of heat management through phase change materials (PCM) in my products, but how does this work”? Outlast Technologies, market leader for temperature regulating phase change materials (PCMs), is often faced with this question. To provide more transparency and a better overview, Outlast will present the complete PCM spectrum at Techtextil: from compounds to fibers/yarns and coated products for various end uses.

Outlast is the only supplier in the textile industry who is able to offer various PCM possibilities. No matter which application - Outlast always has an appealing solution. In the past years, there have been many developments on the fiber side: After releasing the PCM viscose fiber, the first PCM polyester fiber followed. This presented a new opportunity for “filling materials”, which are mostly used for bedding, but can also be utilized for apparel.

Outlast is best known for its presence in the bedding industry (PCMs for mattresses, duvets, mattress protectors/toppers, pillows...), but is also very active in the apparel (outdoor, sportswear, underwear, protective wear...), footwear (shoes, socks, insoles...) and accessory industry (gloves, helmets...). But Outlast has also devoted a lot of time researching new markets where the technology can be utilized - the newest development being in the electronics industry.

PCMs can be structured in the following categories:

- **Outlast® technology in fibers**: This application is suited for products being worn next to skin (for example: underwear, socks, t-shirts, orthopedic products...)
- **Outlast® technology in filling materials**: There are different Outlast® filling materials (based on viscose or polyester fibers), which can be used for bedding or apparel (for example jackets). They can be also blended with downs.
- **Outlast® technology as coating**: A high loading can be reached. Nonwovens or knits serve as raw materials which are coated. The applications are wide: Looking at bedding mattresses and mattress protectors, pillows and duvets take profit of the dynamic climate regulation. Coated products are used for apparel/footwear and PPE from head to toe. This application is also interesting for medical products.
Outlast® technology as MIC: An advanced formulation of Outlast® PCM is finely printed onto flat fabric. This process is ideal for brands seeking a larger volume program using their own fabrics. Outlast® MIC is intended for products worn next to skin and is perfect for the active, casual and sportswear markets.

Outlast® technology as compound: Here Outlast focuses on individual solutions for projects. If a customer already has special process technology available (for example a spraying equipment) the matching Outlast® compound can be used. The customer then produces his end product (for example: mattresses which are sprayed with the compound). With little investment the heat managing performance can be easily achieved.

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 the skin’s microclimate. As the skin gets hot, the heat is absorbed, and as it cools, that heat is released.

Outlast® technology is not wicking technology, which manages moisture by reacting to your sweat and pulling it away from the skin. Outlast® technology will proactively manage heat while controlling the production of moisture before it begins. That’s the Outlast® difference. 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

All in all Outlast works on an exciting, wide field and offers as only supplier a very large spectrum of climate regulating PCM options. Not to forget: The Outlast® performance products are accompanied by an elaborated marketing package including labels and hangtags or POS materials or trainings offered for free. Outlast presents the newest innovations at Techtextil from 4 to 7 May, 2015, in Frankfurt; Hall 3.1, Stand D 61.

Outlast

Outlast Technologies LLC, a privately held U.S. corporation, is the worldwide leader in phase change materials (PCM) 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 proactively 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.

Outlast®, Thermocules™ and ...not too hot ...not too cold ...just right™ are trademarks of Outlast Technologies LLC.

454 words
Pictures: Product range, the Outlast® principle

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Outlast® technology can be used in different applications. No matter if directly included inside the fiber or if coated materials are used - Outlast® phase change materials dynamically reduce sweat production significantly.

Picture 1

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

Picture 2

more information ...

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