Outlast launches Outlast® Xelerate™: PCM + Heat spreader

- Quickly distribute and spread heat

During the night, many people suffer from “intolerable heat build-up”, which makes it difficult to get a restful night’s sleep. Outlast’s climate-regulating phase change materials (PCM) which absorb, store and release excess body heat to reduce overheating and sweating, are a great solution to this. Now, Outlast moves ahead: The innovative company is launching the revolutionary enhancement “Outlast® Xelerate” supporting and accelerating the “normal” PCM performance intensively. Inside, PCMs are combined with a “heat spreader” technology, absorbing and spreading heat quickly, so that the PCM process can run even more actively.

Outlast® phase change materials provide an optimum climate, where unpleasant temperature fluctuations are more balanced and perspiration can be significantly reduced. If that is not enough, you can now benefit from the new development “Outlast® Xelerate”. “We thought about new, innovative ways we could improve our standard PCM technology,” explains Martin Bentz, Managing Director of Outlast Europe GmbH. “And we succeeded. With Outlast® Xelerate we offer a product now combining the PCM technology with the technology of a heat spreader. This material can more effectively spread heat, which is absorbed by the PCM, over a larger area. Thus, the melting and crystallization process of the PCM can be more rapid, and PCM can work more proactively with greater effectiveness.”

And Volker Schuster, R & D Director at Outlast Europe, adds: “In the laboratory, we have proven that with the help of Outlast® Xelerate technology, the thermal conductivity can be increased by up to 30%.” The advantage for consumers is obvious: With Outlast® Xelerate sweating is reduced even more and the heat and moisture management is working more effectively.
How it works

But how do PCMs work? Not too hot, not too cold – just right. That is the easy way it works. Pioneer and market leader is the American company Outlast Technologies LLC, headquartered in Golden/Colorado, regarding the research, development, design and marketing of temperature regulating phase change materials (PCM). The PCM technology Outlast® was originally developed for NASA to protect astronauts against the extreme temperature changes in space. Outlast®technology utilizes phase change materials (PCM) that proactively absorb heat, store it and release it for optimal thermal comfort. Big advantage: Sweat production is significantly reduced.

Proactive climate regulation

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

What is affected by the PCM is the microclimate on the skin. How sensitive the human body is to temperature fluctuation here becomes clear looking at the small range of the comfort zone: The human body temperature is 36.6°C on average. The inner temperature (e.g. heart, kidneys…) is the core temperature and ranges between small limitations, normally it is 37°C. The shell temperature of the skin and limbs as a rule is lower and varies between 28°C and 33°C. If the normal temperature between 36.5°C and 37.4°C differs slightly at the top, we are talking of fever, if it sinks below it leads to hypothermia. If this range can be positively influenced by dynamically working Outlast® materials it is possible to maintain the personal comfort zone and to reduce annoying peeks of being too warm or too cold. Especially looking at prosthesis this brings a special plus for comfort.
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 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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Outlast® Xelerate is the name of the latest development from the market leader Outlast. Outlast® Xelerate combines phase change materials (PCM) with a heat spreader technology, so heat can be quickly absorbed and conducted.
New: Outlast® Xelerate. Outlast® Xelerate quickly spreads heat, so the PCM effect can be improved.
Outlast® technology absorbs and stores excess heat and releases it. Heat spreaders improve thermal conductivity. Outlast® Xelerate is a new, innovative material offering ultimate heat and moisture management.

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Picture: Outlast Technologies LLC

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