

Outlast®

Unique Climate Regulation



feeling just right

Outlast® Technology



The Origin

- Developed for NASA and US government
- Designed to balance temperature
- Providing more comfort



Registered trademark of the Space Foundation,
an initiative of the aerospace industry and NASA



Outlast Technologies GmbH

The Company



- US-Invention, founded in 1990 as Outlast Technologies LLC , Golden/Colorado
- Today, globally active enterprise with HQ in Heidenheim/Germany
- Offices in USA / Europe / Asia
Agents worldwide
- International production, global sales
- Market leader with many patents offering the widest PCM range

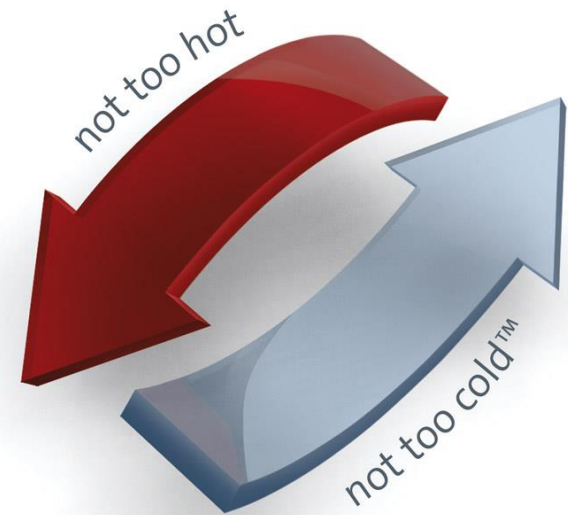


Heat Managing Technology



Outlast® technology is:

- Active temperature regulation
- Moisture reduction technology
- Patented phase change material
- Certified Space Technology™



Proactive Technology



Outlast® technology is not:

- Reactive wicking technology
- Air conditioner
- Heater



Phase Change Materials

How PCMs Work



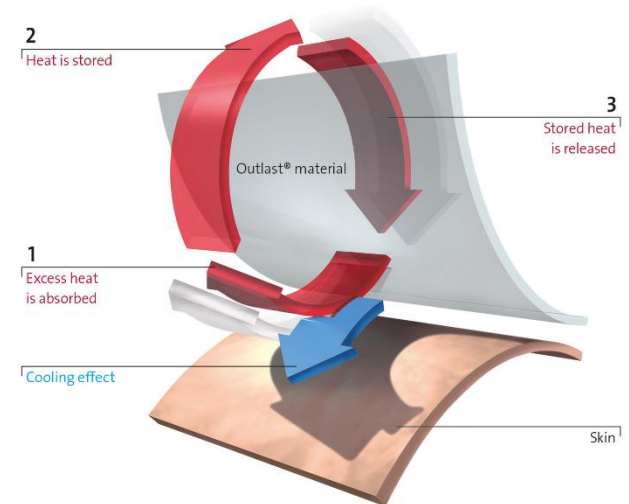
- Example: A glass of water with ice
- Environment heats up
- Ice absorbs energy and starts melting
- While ice is melting, water stays at same temperature
- The more ice is in the water, the longer it will stay cool.



Outlast® Technology

How PCMs Work

- PCM changes from solid to liquid and back
- Absorbs body heat
- Stores body heat
- Releases body heat
- Maintains comfort zone



Outlast® Benefits

Dynamic System

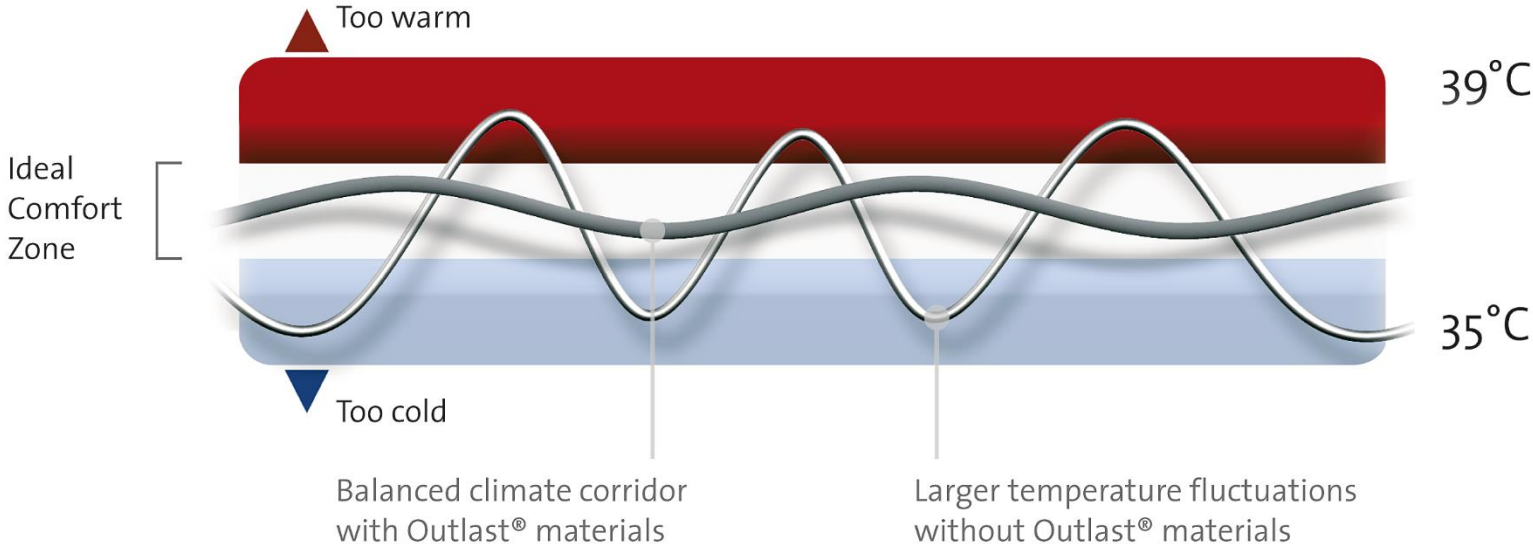
- Less overheating
- Less chilling
- Less perspiration
- More comfort
- Not too hot, not too cold, just right



Continuous Temperature Regulation



Outlast® vs. Traditional Products

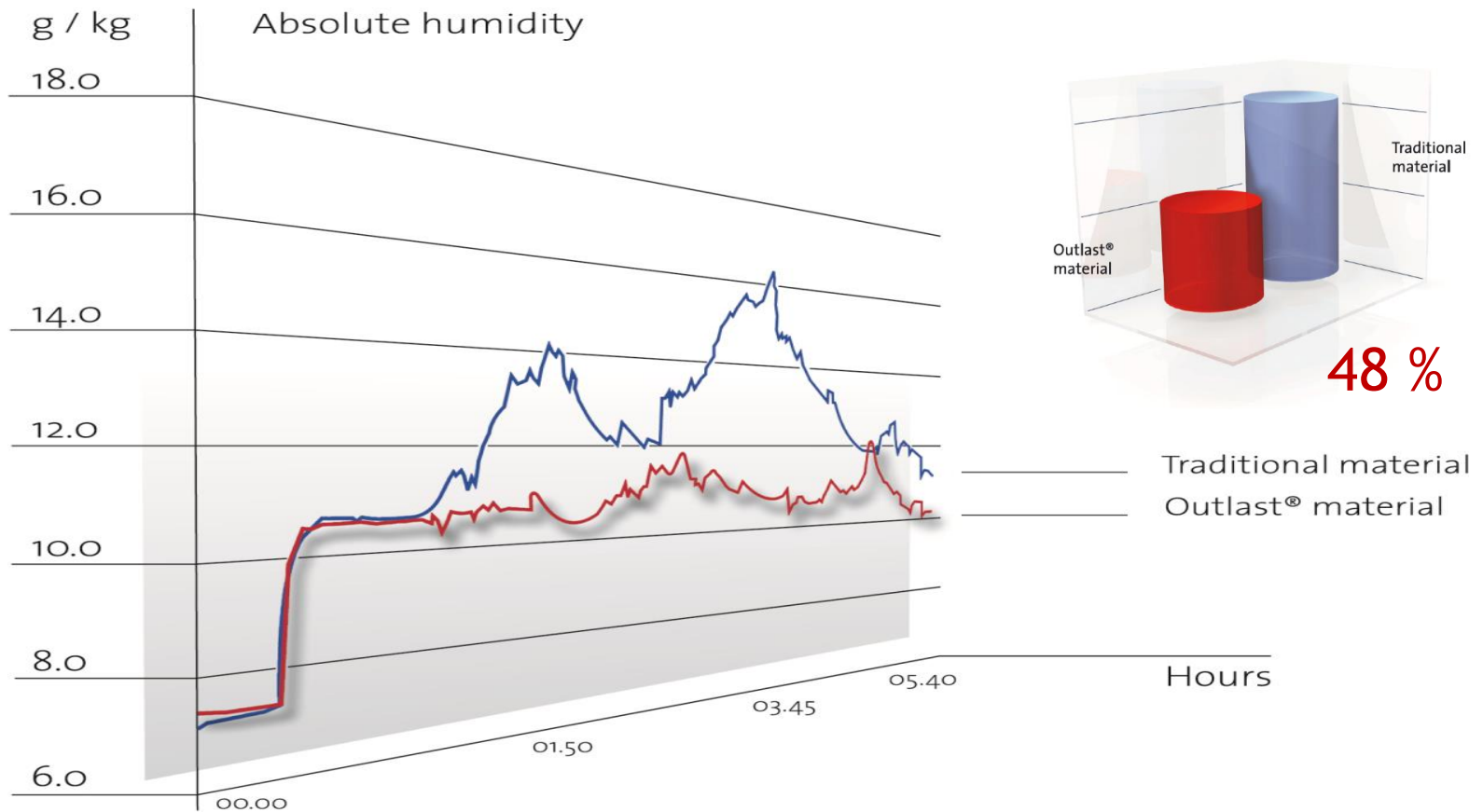


Comparison of products with and without Outlast® technology

Test Method: c.russ



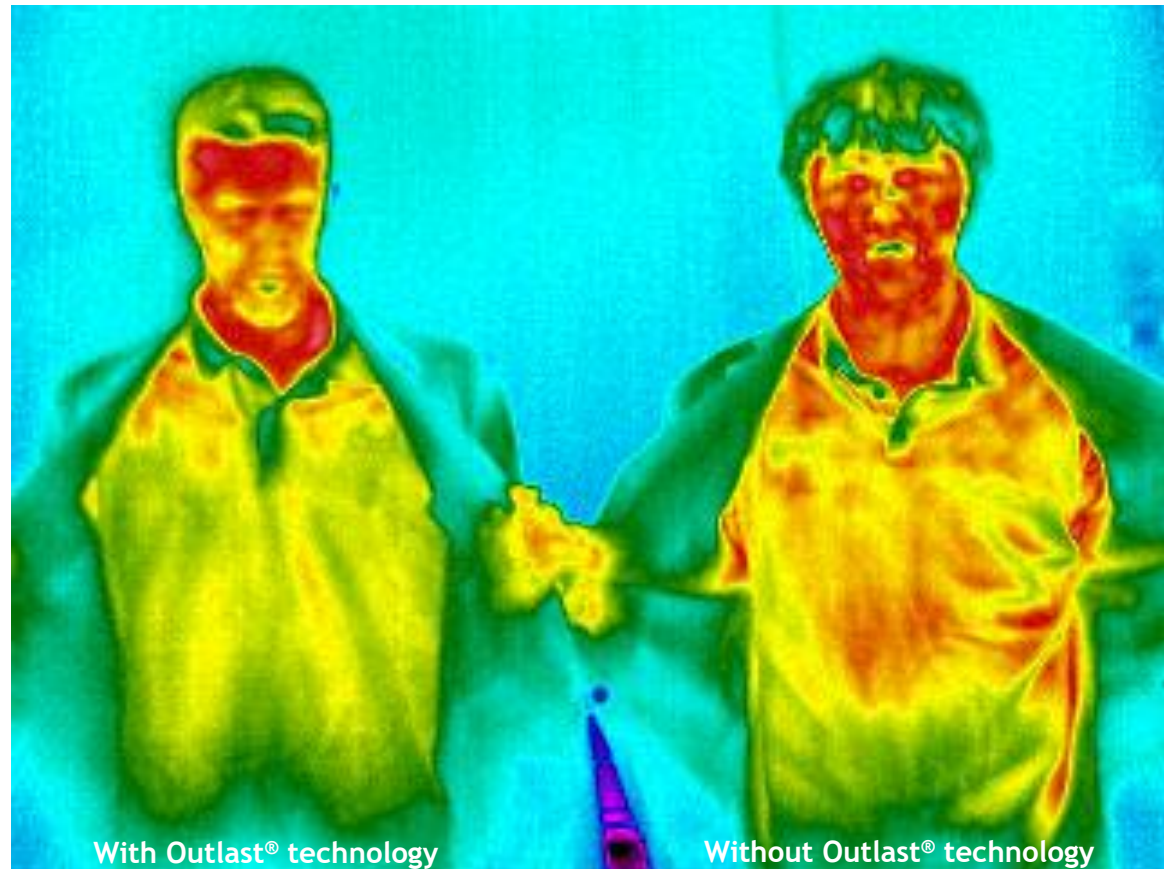
Absolute Humidity in a Quilt



© c.russ

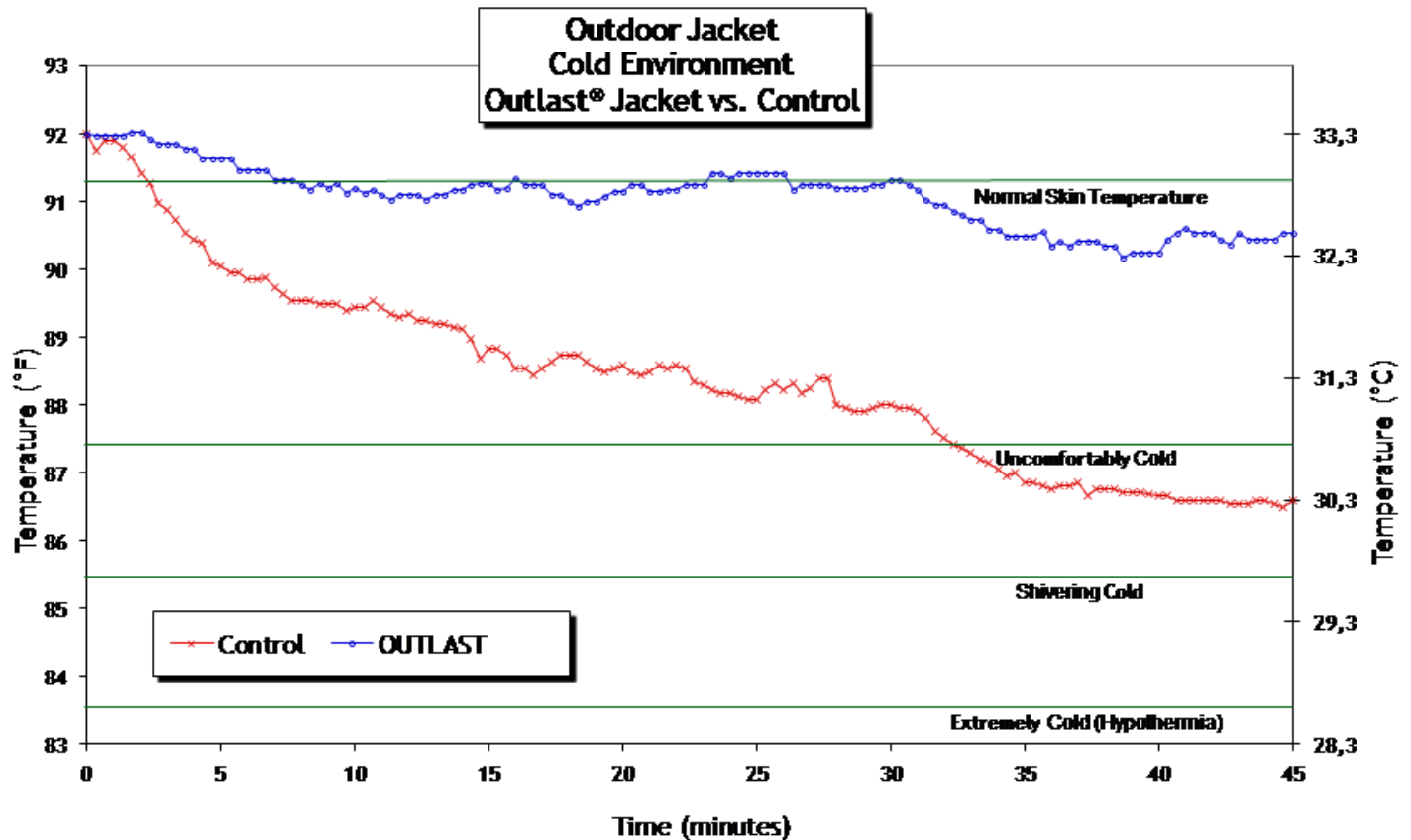
Test Method: IR Camera

Infrared Radiation



Test Method: Climate Chamber

Product Testing



Outlast® Product Range



Outlast® technology can be applied:

- By coating
- In fibers
- By printing (MIC)
- In composites (e.g. sprayed)



Outlast® End Uses



Various Applications

- Bedding
- Apparel
- Footwear / socks / insoles
- Military and protective products
- Seating
- Electronics
- Many others

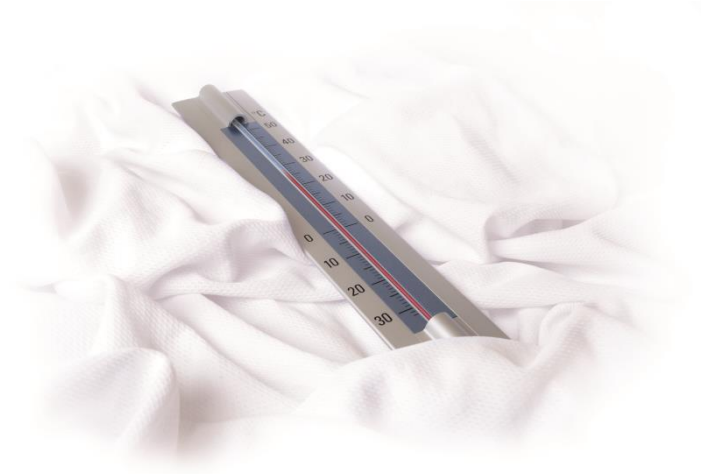


Outlast License Model

Trademark/Manufacturing License Agreements



- To influence brand positioning
- To protect patents
- To protect brand customers
- To protect supply chain



Outlast® Support

Marketing



- Marketing support
- Press support
- POS materials
- Trainings
- e-learning
- Hangtags / labels





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