

Cool & Thermoregulation
Yarn



Cell Solution[®]

Enhanced fabrics

CLIMA

INTRODUCING CLIMA:

The smart textile that regulates body temperature for mattress ticking, bedding, and home textiles.

Made from sustainable Lyocell fibers and enhanced with Phase Change Materials (PCM), the innovative fiber contained in **CLIMA** fabrics by STELLINI absorbs, stores, and releases body heat to keep you perfectly comfortable all night long.



A NEW SMART LYOCELL FIBER

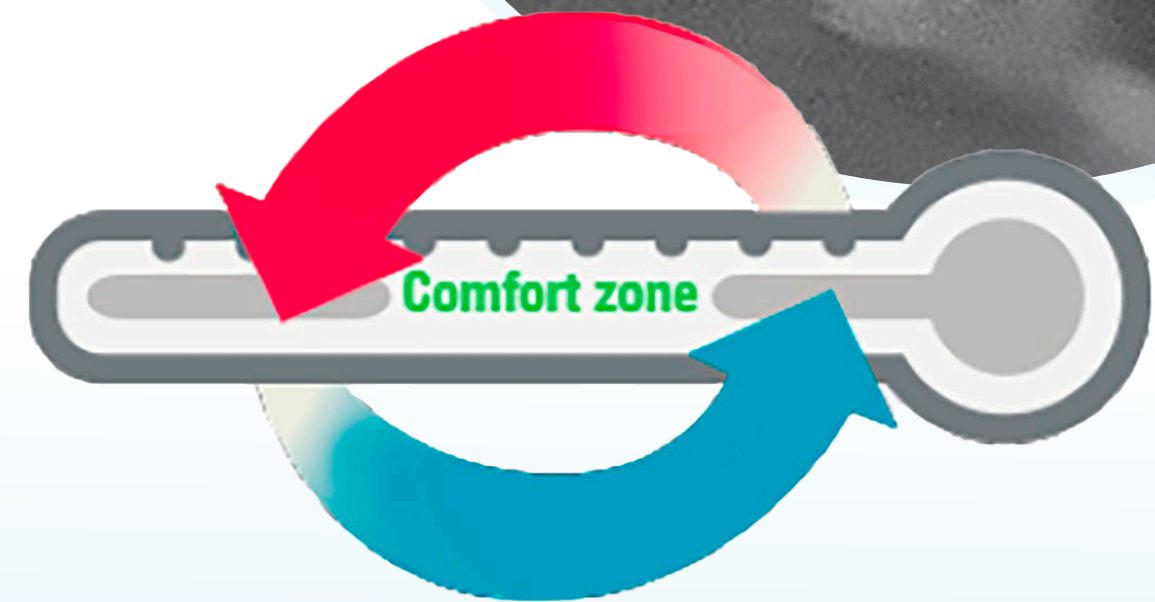
Everything starts from the fiber

Cell Solution® Clima fiber by smartpolymer enables the incorporation of a one-of-a-kind PCM technology which does not contain microcapsules or coatings. This structure permits an easy and long lasting storage system of active agents, which regulate the heat-conducting properties of the yarn that makes up **CLIMA** fabrics.

What is a PCM technology?

PCM technology, or Phase Change Material technology, utilizes materials that absorb and release thermal energy when they change state (solid to liquid or liquid to solid). This property allows the material to store and release significant amounts of heat, making them useful for temperature regulation in various applications.

Magnification of the fiber under the microscope



The fibers absorb excessive heat, accumulate it and release it.



Temperature

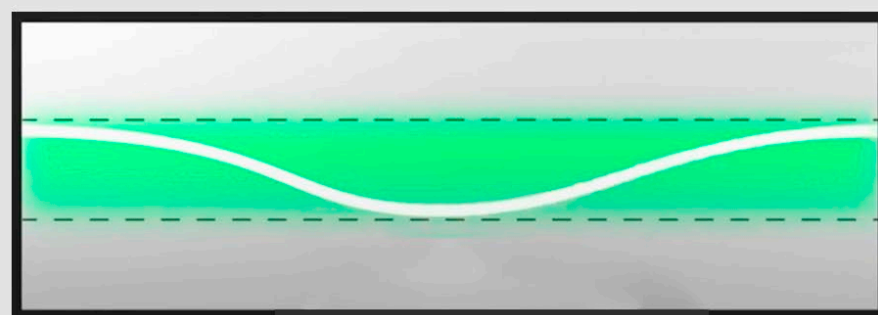


Time

Without CLIMA fabrics



Temperature



Time

With CLIMA fabrics

How does it work?

- Absorption of body heat as temperature rises
- Fabric stores heat energy
- Heat is released when the temperature drops

The result is an active thermoregulative fabric that adapts in real time, ensuring constant comfort and optimal sleeping conditions.

Sustainability Meets Performance

Raw materials are biological based and biodegradable **Cell Solution® Clima** by smartpolymer is engineered with sustainability in mind. Its raw material—wood pulp—is harvested from non-endangered, responsibly managed forests FSC certified, and the PCM additive is based on refined vegetable oils, offering a **natural alternative** to synthetic cooling agents.

By enhancing personal thermal regulation, **CLIMA fabrics** can reduce the need for artificial cooling systems like air conditioning, contributing to energy-saving behavior and environmentally responsible product development.

The Synergy for optimal body climate

Cell Solution® CLIMA
Cellulosic fiber with Lyocell:
Moisture absorption up to 50%
+ Thermoregulation by
incorporated PCM

Elevate Your Products with Smart Thermoregulation

Integrating **CLIMA** into your product range allows you to offer next-generation comfort, sustainable innovation, and competitive differentiation in a crowded market. It's the perfect fabric solution for brands seeking to merge eco-consciousness, smart textile technology, and premium performance.

Contact us to touch with hand some **CLIMA** fabric samples and develop custom projects together.

Application

- Mattress ticking fabrics
- Bedding: pillows, footmats and head protectors
- Upholstery and furniture fabrics
- Home textiles: throws, cushions, covers
- Wellness and medical contract fabrics



CLIMA fabrics in a nutshell



Thermoregulation



Moisture control



Botanic Origin



Continuous performance



Soft to the touch

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