

Cool &
Thermoregulation
Yarn



CT NASSAU
Tape, Jacquard And Stretch Ticking

BE COOL. BE SUSTAINABLE. SLEEP BETTER.

The cooling yarn that beats the heat

In times when one heat record after another gets broken, energy and cooling are ‘hotly’ debated topics. How can we stay cool, both literally and figuratively?

Global warming and energy crises severely limit our ability to develop along a sustainable path. Increasing renewable energy sources and decreasing energy consumption are fundamental steps to achieve sustainability. Technological innovations that allow energy-saving behaviour can support sustainable development pathways.

One of the elements that puts a tremendous pressure on residential energy consumption is the use of air conditionings. These must ensure that the entire temperature in our bedrooms is regulated in order to guarantee an optimal sleep quality.

But what if we were to cool people instead of spaces? That question was asked by scientists focusing on the ‘personalised cooling’ of individuals or the so called ‘personal thermal control’.

Recently, this research has led to the development of a unique cooling yarn. **ZEN** is a polyethylene-based yarn that provides superior cooling thanks to modifications in the fiber’s molecular structure. These ensure better thermal conductivity so that excess body heat is dissipated faster.

And that’s two birds with one stone: while ZEN ensures a better sleep quality, it also helps us to save on energy!

Curious about how this works and what this means for you? Then read on!

COOLER THAN COOL

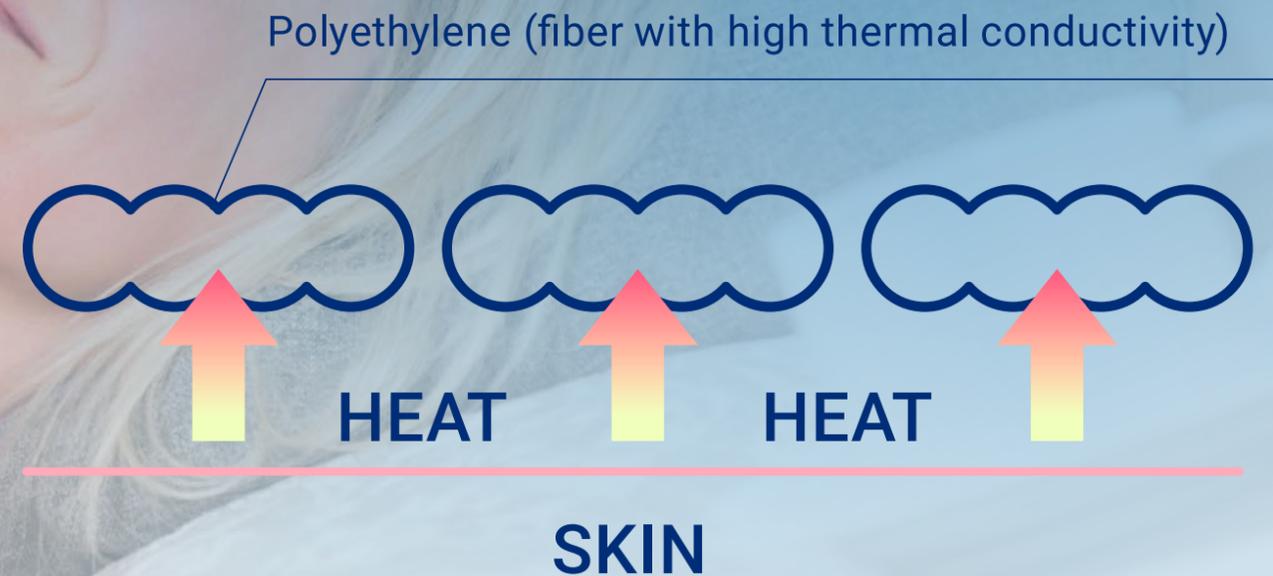
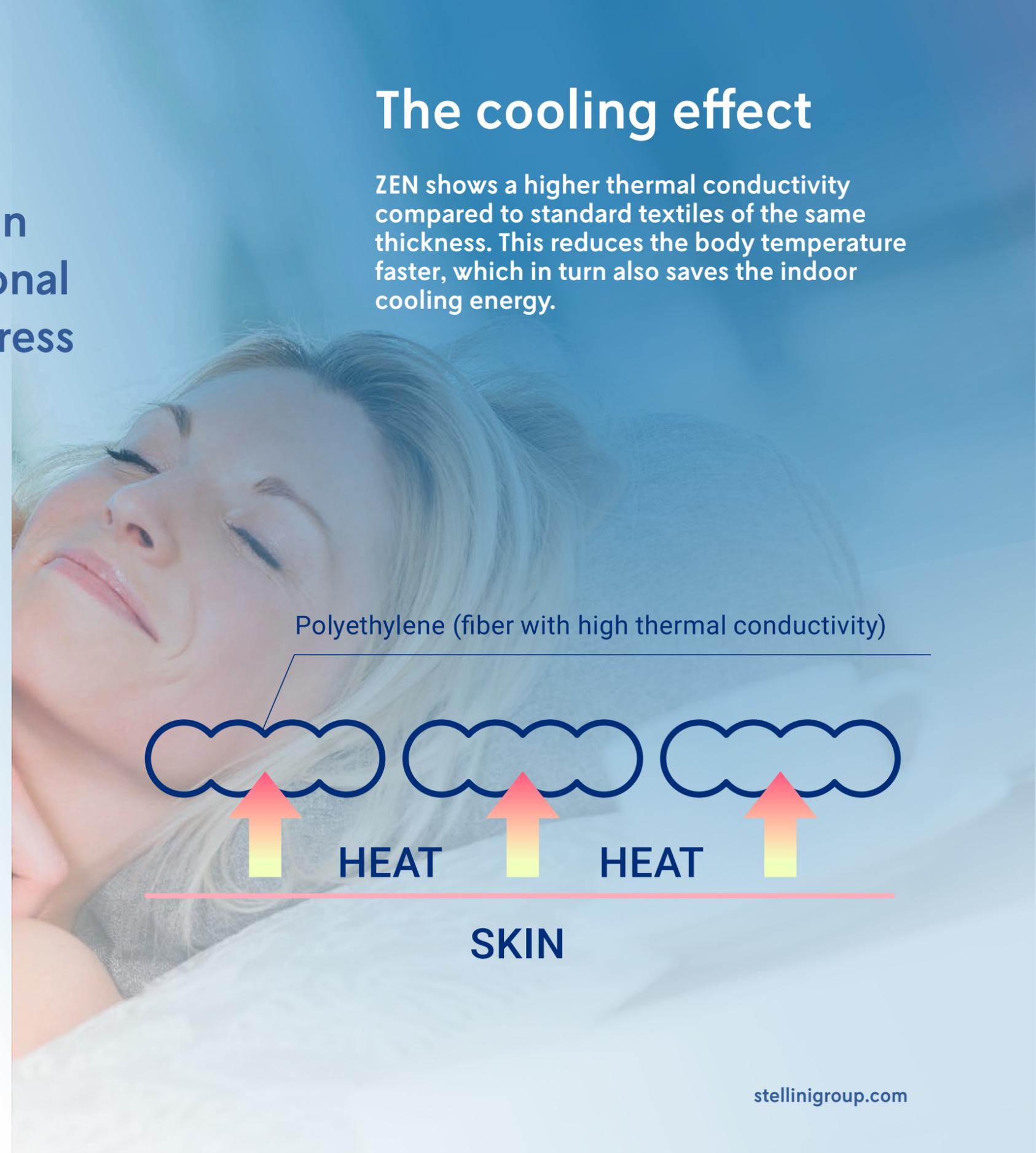
Key benefits

As a polyethylene based product, ZEN has – in addition to the cooling effect – many additional advantages that make it ideal for use in mattress textiles.

- ✓ **COOL TO THE TOUCH** – not only does it dissipate heat faster, it also feels cooler.
- ✓ **NON-HYGROSCOPIC**: as it doesn't absorb humidity, the surface is always kept dry
- ✓ **WASHABLE**
- ✓ **DURABLE** thanks to its excellent strength to weight ratio and high abrasion resistance
- ✓ **SOFTER** – A higher evenness of the yarn gives a softer touch sense.
- ✓ **PERMANENT PERFORMANCE** as it is a fiber and not a finish
- ✓ **ENVIRONMENTAL FRIENDLY**: HDPE is one of the easiest polymers to recycle

The cooling effect

ZEN shows a higher thermal conductivity compared to standard textiles of the same thickness. This reduces the body temperature faster, which in turn also saves the indoor cooling energy.



ZEN in a Nutshell



Thermoregulator



Soft to
the touch



Performance
over time



Washable



Recyclable



Non-stop
performance

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