

## TENCEL<sup>®</sup> has superior moisture absorbency

- TENCEL<sup>®</sup> provides perfect moisture management due to controlled and regular absorption throughout the fibre



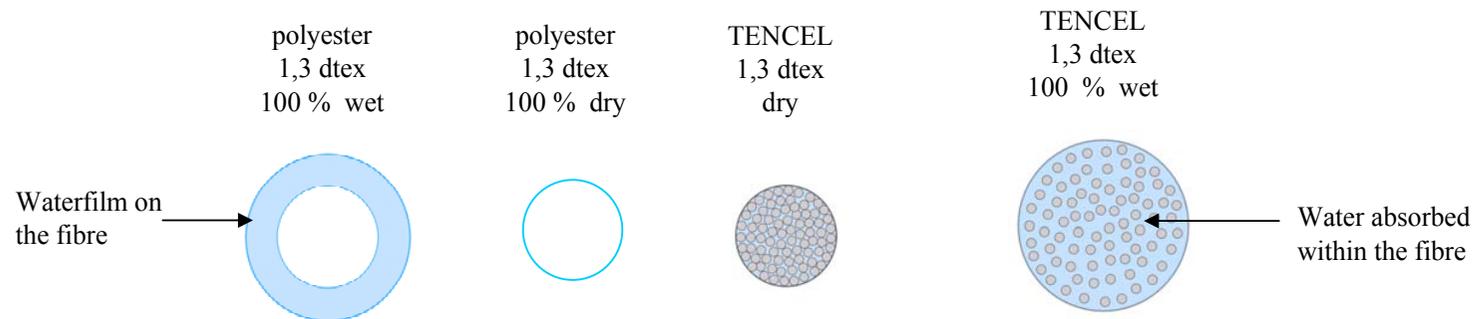
**Cotton**



**TENCEL<sup>®</sup>**

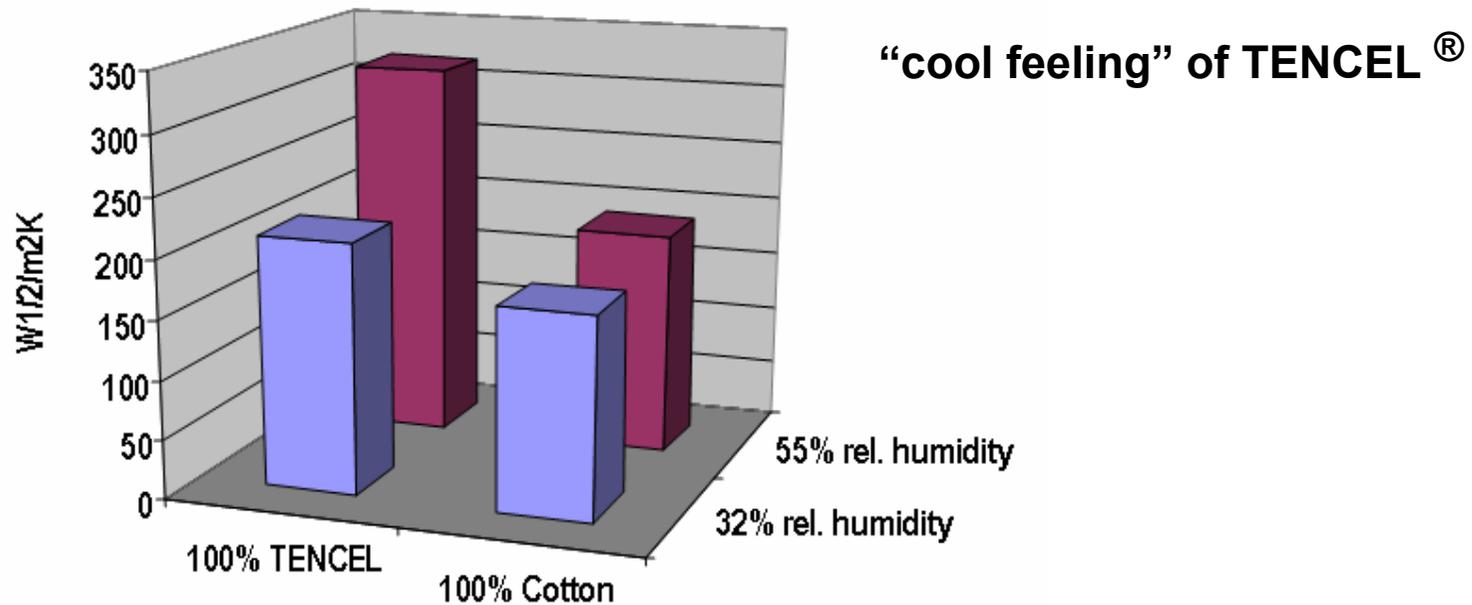
## TENCEL® has superior moisture absorbency

- TENCEL® can absorb large amounts of moisture whilst remaining dry on the surface
- On non-absorbent fibres, like polyester, moisture remains on the surface of the fibre



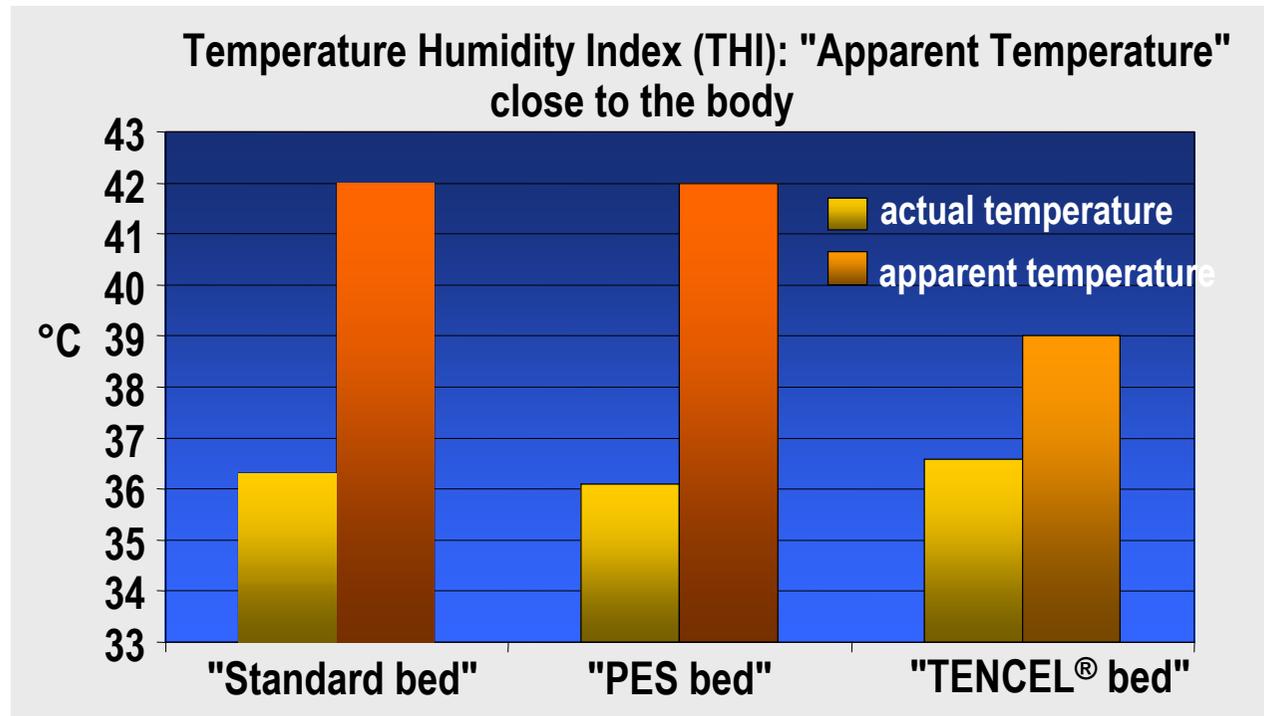
## TENCEL<sup>®</sup> is cool and dry

- TENCEL<sup>®</sup> feels cooler than cotton
- This is due to the higher water content at a given temperature



# TENCEL<sup>®</sup> is cool and dry

- Comparative study of micro-climate in bed using various fibre materials
- Humid air is felt warmer than dry air
- The apparent temperature in a TENCEL<sup>®</sup> bed is lower due to the lower humidity



THI calculation according to Web site of "National Weather Service"  
<http://www.erh.noaa.gov>



## Wear comfort TENCEL® versus cotton \*

Comparisson 100% CLY shirts versus 100 % CO shirts; plain weave, Ne 40/1, 115 g/m<sup>2</sup>, easy care finish

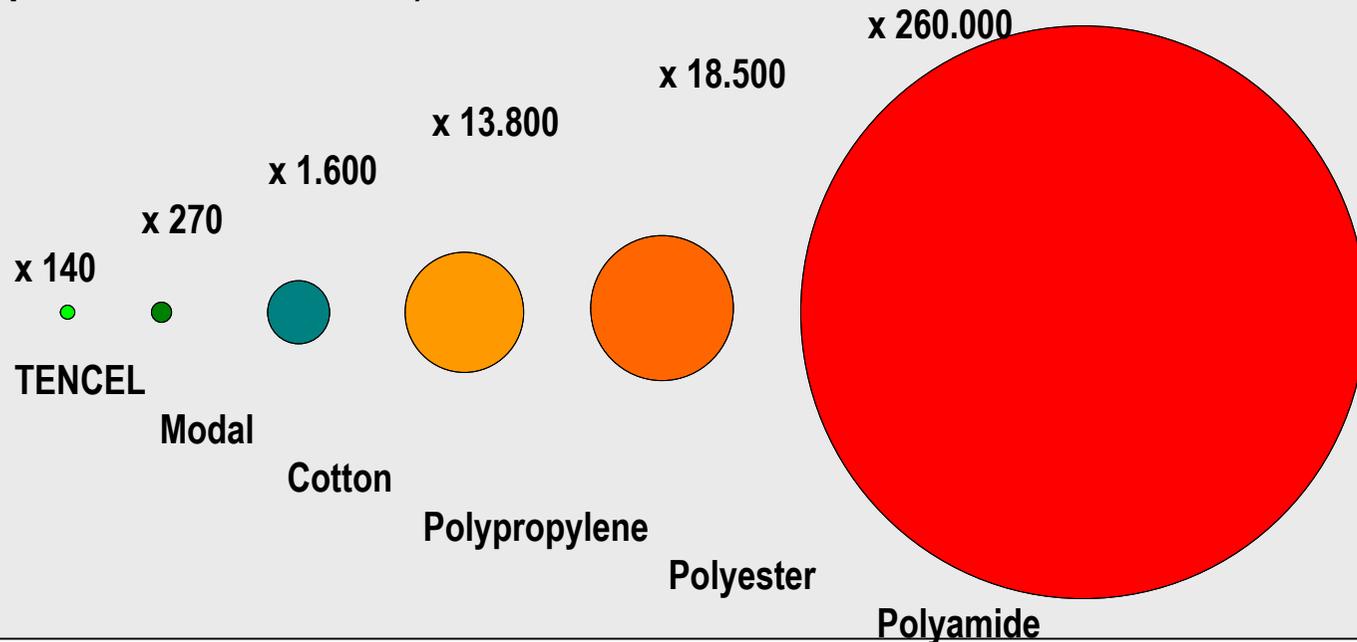
<i>Property/Parameter</i>	<i>Cotton</i>	<i>Lyocell</i>	<i>Comment</i>
<b>Thermophysiological properties</b>			
Water vapour uptake $F_i$ [g/m <sup>2</sup> ]	6,3	9,5	CLY shows 51 % higher vapour uptake
Moisture regulation index $F_d$ (Buffering capacity)	0,57	0,65	CLY shows 14 % better buffering capacity
Sweat transport $F$ [g/m <sup>2</sup> h] (at 25 °C, 55 % r. h.)	840	933	CLY shows 11 % better sweat transport
<b>Skin Sensorial properties</b>			
Wet cling index $i_k$	21	14,2	Values above 15 are sensed as nonsatisfying
Surface index (Roughness/hairiness)	2,5	1,7	CLY shows smoother surface
Sorption index $i_B$ Transport speed of liquid sweat	479	290	Low index means better transportation of liquid sweat
Stiffness	higher	lower	CLY shows softer touch being good for skin sensorial property

\* Report Nr. ZO.4.3895; Prof. Umbach, Institut Hohenstein

# TENCEL<sup>®</sup> retards bacterial growth

- In vitro tests show that bacterial growth on cellulosic fibres is lower than on synthetic fibres (all single jersey, same weight)
- TENCEL<sup>®</sup> shows exceptional low growth of bacteria

Bacterial growth in 24 hours (multiplication factor), modified “Challenge Test” (Jap. Standard JIS 1902 L)



## TENCEL® retards bacterial growth

- Lab tests prove that the growth of fungi like mildew is lower on TENCEL® fibres than on PES fibres at high air humidity (up to 95 %)
- Less growth of fungi means less growth of dust mites as fungi are substantial part of their food
- Reduced growth of dust mites means reduced risk of allergies
  
- TENCEL® fabrics and duvets are washable (depending on construction, finishing and blend)

