

# Temperature Control Fabrics: Optimising Wearer Comfort, 2013 Edition

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## Abstracts

Clothing made from temperature control fabrics plays a critical role in boosting the physiological comfort of the wearer -- and such comfort can have a vital role to play in the performance of an athlete. A major trend in the outdoor wear industry is the use of fibres and fabrics which utilise thermal adaptive technology for specific parts of the body. This technology moderates the effects of temperature fluctuations by warming the body when the temperature drops or cooling the body when the temperature rises. Other technologies -- such as silver-based fabrics, battery-powered garments and adjustable insulation systems -- are also attracting the attention of outdoor enthusiasts. This report provides a wealth of information on: the physiology of temperature regulation; the role of clothing in temperature regulation; and the different types of temperature regulating fabrics and materials. The report also features detailed information on recent innovations in temperature control fabrics and apparel, and provides an outlook for the future of the market.

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## PRODUCTS

### 3M: THINSULATE

Advansa: Thermo°Cool  
APT Fabrics: Acclimatise  
Columbia Sportswear: Omni-Freeze Zero  
HeiQ Materials: Adaptive  
Interactive Wear: IthermX  
Invista: Thermolite  
Libolon: CoolBest II  
Litrax: Dry-Balance  
Luxilon Industries: Luxicool  
Marmot: MemBrain  
Nylstar: Nylair  
Nilit: Nilit Breeze  
Noble Biomaterials: X-Static  
Outlast Technologies: Thermocules  
Patagonia: Encapsil  
Polartec: Polartec Alpha  
PrimaLoft: PrimaLoft One  
Rhodia: Emana  
Schoeller Technologies: C\_change  
Schoeller Technologies: coldblack  
Schoeller Technologies: solar+  
Singtex: Eco2sy  
Smartfiber: smartcel clima  
Sympatex Technologies: Reflexion  
Thermore: TMK and Rinnova  
Toray Industries: Dermizax  
Toray Industries: Quix Down  
W L Gore & Associates: Airvantage  
W. Zimmermann: Novonic

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