

# Temperature Control Fabrics, Finishes and Materials: Optimising Wearer Comfort

<https://marketpublishers.com/r/T93DEE49B9CEN.html>

Date: May 2018

Pages: 47

Price: US\$ 750.00 (Single User License)

ID: T93DEE49B9CEN

## Abstracts

Demand for clothing which helps the wearer to maintain a comfortable body temperature is increasing—reflecting a growing focus by consumers on comfort, health and well-being, and rising demand for apparel which helps them to feel comfortable while they are pursuing a broad range of activities. As a result, temperature control materials—which have traditionally been associated with sportswear and outdoor apparel—are being incorporated increasingly into a broad range of everyday products, including athleisure apparel, fashion apparel, sleepwear, underwear and workwear. A wide variety of temperature control fabrics, finishes and materials is now available, and the market is fiercely competitive. Innovation is key, and a number of companies are focusing increasingly on the development of dynamic temperature control technologies which can adapt their properties according to changes in environmental conditions and the body's microclimate. This report provides a wealth of information on the market for temperature control fabrics, finishes and materials, and discusses the latest innovations in this sector with specific reference to: dynamic temperature control; fabrics, finishes and materials which facilitate cooling; and insulating materials. Furthermore, the report includes information relating to: environmental sustainability; the physiology of temperature regulation; the role of clothing in temperature regulation; the thermal properties of fabrics; and applications of temperature control fabrics, finishes and materials.

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HDWool: HDWool

Invista: insulating denim fabrics

NIPI (Natural Insulation Products Inc): Thindown fabric

Polartec: Polartec Power Fill

Pontetorto and Vaude: Biopile fabric

PrimaLoft: PrimaLoft Gold Insulation with Cross Core and PrimaLoft Silver Insulation  
Natural Blend

Sympatex Technologies: new heating systems for workwear

Teijin Frontier: Solotex Thermo fibre

ThermalTech: Thermaltech Copper Core Yarn, Thermaltech Heating Yarn and Thermaltech

Interlining Mesh

Thermaltech Copper Core Yarn

Thermaltech Heating Yarn

Thermaltech Interlining Mesh

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Teijin Aramid: Teijinconex Coolnex Super Wicking Fabric

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