

The Thermal Comfort Properties of Certain Egyptian Stretched Knitted Fabrics

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Abstract:

In this work, the thermal comfort properties of some Egyptian stretch knitted fabrics made from synthetic and lycra yarns based single jersey were statistically investigated. These products are very common in Egyptian Market. For this aim, this paper has focused on the thermal comfort properties of samples; thermal comfort, thermal resistance, thermal absorptivity, thermal conductivity, water vapour permeability and air permeability measured by apparatus due to ASTM- D 1518-85. The research questions has been "What are the types of stretch knitted fabric that have highest thermal specifications?". The objectives has been to identify common thermal comfort properties of Certain Egyptian Stretched Knitted Fabrics. The results indicate that each selected fabric can be used as good thermal insulators, have a high thermal performance and thermal response as insulators. The effect of fabric thickness and weight on the fabric temperature variations has the obvious significance that higher thickness means good thermal insulation

Keywords:

- *Stretch knitted fabrics,*
- *thermal comfort,*
- *thermal resistance,*
- *thermal absorptivity,*
- *thermal conductivity,*
- *permeability.*

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