BS ISO 16533:2014

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Textiles — Measurement of exothermic and endothermic properties of textiles under humidity change

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee TCI/24, Physical testing of textiles.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Textiles — Mesurage des propriétés exothermiques et endothermiques de textiles sous conditions d'humidité changeantes

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
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Foreword

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The committee responsible for this document is ISO/TC 38, *Textiles*.

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Introduction

The thermal properties of textile materials contribute to a wearer's physiological comfort, product's durability, etc. Hence, there are many kinds of products with specific thermal performances and various test methods that have been developed and standardized. However, these tests should be conducted in a certain humidity. The method for thermal properties in elevated or reduced humidity has not been standardized.

All materials generate heat when absorbing moisture and absorb heat when releasing moisture. The heat of absorption varies according to the material, for example, the heat of absorption in wool fibre is much bigger than that in common synthetic fibre. Recently, with this property, some heat-generating textiles have been developed and applied to various products, such as outdoor wear, sportswear, inner wear, special working wear, and healthcare wear. Therefore, the test for the hygroscopic and exothermic properties of textiles is needed for both producers and customers. Despite these needs, accurate and reliable information about hygroscopic and exothermic properties of textiles cannot be offered because of the absence of a standard test method.

The exothermic and endothermic properties of textiles under changing conditions of environmental humidity can be measured with this test method and apparatus proposed in this International Standard.

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