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Clothing - Physiological effects - Measurement of water vapour resistance by means of a sweating manikin

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Clothing - Physiological effects - Measurement of water vapour resistance by means of a sweating manikin

Vêtements - Effets physiologiques - Mesurage de la résistance à la vapeur d'eau à l'aide du mannequin transpirant

Bekleidung - Physiologische Wirkungen - Messung des Wasserdampfdurchgangswiderstandes mittels einer schwitzenden Prüfpuppe

This European Standard was approved by CEN on 29 August 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 17528:2022 (E)

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European foreword

This document (EN 17528:2022) has been prepared by Technical Committee CEN/TC 248 “Textiles and Textile Products”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2023 and conflicting national standards shall be withdrawn at the latest by April 2023.

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EN 17528:2022 (E)**Introduction**

The type of clothing worn by people directly affects the heat exchange between the human body and the environment. The heat transfer is both sensible (conduction, convection, and radiation) and latent (evaporation). The water vapour resistance of a clothing ensemble is dependent upon the designs and materials used in the component garments, the amount of body surface area covered by the clothing, the distribution of the layers over the body, looseness or tightness of fit, and the increased surface area for heat loss. Water vapour resistance measurements made on fabrics alone do not take these factors into account. Measurements of the resistance to evaporative heat loss provided by clothing can be used with thermal insulation values (EN ISO 15831) to determine the comfort or stress of people in different environments.

1 Scope

This document specifies the requirements of the sweating manikin and the test procedure used to measure the water vapour resistance of a clothing ensemble, as it becomes effective for the wearer in practical use in a defined environment, with the wearer either standing or moving. This water vapour resistance, among other parameters, can be used to determine the effect of clothing on the physiology of the wearer in specific climate/activity scenarios.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 11092, *Textiles - Physiological effects - Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test) (ISO 11092)*

EN ISO 15831, *Clothing - Physiological effects - Measurement of thermal insulation by means of a thermal manikin (ISO 15831)*

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