
Textiles — Determination of drying rate in dynamic state by the modified sweating-guarded hotplate

Textiles — Détermination de la vitesse de séchage en régime dynamique à l'aide de la plaque chaude gardée transpirante modifiée





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 13029 was prepared by Technical Committee ISO/TC 38, *Textiles*.

Introduction

The purpose of this International Standard is for testing textile fabrics that have moisture-management properties.

International Standards do not provide a detailed definition of Moisture Management Textiles. Here, moisture management generally refers to a feature in which absorbed sweat is transported within the fabric and along the fabric surface and is dried from the fabric surface.

The drying that takes place in textiles, which are designed to dry the absorbed sweat in a timely manner using the capillary-tube phenomenon, progresses in a condition that is different from the drying that is generally practiced after washing. This is because textiles intended for moisture-management properties show the feature of drying the absorbed sweat at the same time as the sweat vapour is continuously allowed in from the human body. Also, the drying of the textile progresses by evaporating only in the direction that is opposite to the side where the sweat heated by the human body temperature contacts the skin. To distinguish between these two types of drying, the condition in which textiles are dried after washing is specified as “steady state” while “dynamic state” drying is the term used for the drying feature of the textile material with moisture-management properties.

To evaluate the drying condition of textiles under a dynamic state, the sweating-guarded hotplate (SGHP) equipment specified in ISO 11092 has been modified and used. Distilled water is used to avoid the estimation errors that can occur when applying artificial sweat to the SGHP.

This International Standard does not evaluate the physiological feature of textile materials. However, it can provide information that can be used for comparison among textile materials by estimating their drying features in limited environmental conditions.