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**Textiles - Evaluation for water resistance and water vapour
permeability**

纺织品 防水透湿性能的评定

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Textiles - Evaluation for water resistance and water vapour permeability

1 Scope

This document specifies the terms and definitions, test methods, evaluation and identification for water resistance and water vapour permeability of textiles.

This document applies to all types of fabrics and their products.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document.

GB/T 4744, Textiles - Testing and evaluation for water resistance - Hydrostatic pressure method

GB/T 4745, Textiles - Testing and evaluation for water resistance - Spray test method

GB/T 8629-2017, Textiles - Domestic washing and drying procedures for textile testing

GB/T 12704.2-2009, Textiles - Test method for water-vapour transmission of fabrics - Part 2: Water method

3 Terms and definitions

The following terms and definitions are applicable to this document.

3.1

Water resistance and water vapour permeability

The performance of the sample to resist wetting and permeation by water, and to allow water vapour to escape.

Note: The water resistance and water vapour permeability of the sample is generally characterized by hydrostatic pressure, spray rating and water vapour transmission rate.

3.2

Hydrostatic pressure

The pressure per unit area of a sample when it is permeated by liquid water.

3.3

Spray rating

The degree to which a fabric surface resists wetting by water.

[Source: GB/T 4745-2012, 3.2]

3.4

Water vapour transmission rate

WVT

The mass of water vapour passing through the unit area of the sample vertically within the specified time, under the condition of keeping the specified temperature and humidity on both sides of the sample, in grams per square meter hour [$\text{g}/(\text{m}^2 \cdot \text{h})$] or grams per square meter 24 hours [$\text{g}/(\text{m}^2 \cdot 24\text{h})$].

[Source: GB/T 12704.2-2009, 3.1]

4 Sampling and sample preparation

4.1 The method and quantity of sample collection shall be carried out according to the product standard. For fabrics, each full-width fabric of more than 1.5 m cut, during sampling, shall be more than 15 cm from the edge of the fabric, and more than 2 m from the edge shall be avoided; for products, it shall be at least 2 units.

Note: The unit can be pieces, sets, strips, etc.

4.2 Cut representative samples -- which meet the test requirements of hydrostatic pressure, spray rating and water vapour transmission rate -- from the item. The samples shall avoid defects, stains and wrinkles that affect the test results. For products, samples for hydrostatic pressure shall be taken from different fabrics that meet the test requirements; samples for hydrostatic pressure at the seam shall be taken from the seam tape at the flat part.

5 Test methods

5.1 Hydrostatic pressure

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