INTERNATIONAL STANDARD



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Textiles — Measurement of water vapour permeability of textiles for the purpose of quality control

Textiles — Mesurage de la perméabilité à la vapeur d'eau des textiles dans le but du contrôle qualité



Reference number ISO 15496:2004(E)

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Foreword

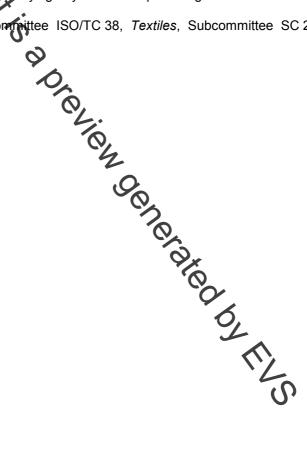
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ISO 15496 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 2, *Cleansing*, *finishing and water resistance tests*.



Textiles — Measurement of water vapour permeability of textiles for the purpose of quality control

1 Scope

This International Standard describes a comparatively simple method for testing the water vapour permeability of textiles that will provide the manufacturer with a clearly recognized method for quality control within the plant.

The simple test method described in this International Standard is not applicable for classifying the water vapour resistance of textiles against values relating to physiological effects specified in product standards, and particularly not those relating to protective equipment.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 water vapour permeability WVP

characteristic of a textile material describing the amount of water vapour diffusing through the textile per square metre, per hour and per unit difference of water vapour pressure across the textile

3 Symbols and units

Symbol	Description	Unit
а	Area of the measuring cup opening	m ²
Δt	Measuring time	h
Δm	Change in mass of the measuring cup during the period Δt	g
$\Delta m_{\sf app}$	Change in mass of the measuring cup on the specimen holder with only membrane during the period Δt	g
Δp	Partial water vapour pressure difference across the specimen	Pa
$p_{\sf sa}$	Saturated water vapour pressure at the test room temperature T_a	Pa
$p_{\sf sb}$	Saturated water vapour pressure at the water bath temperature T_{b}	Ра
RH	Relative humidity in equilibrium with saturated potassium acetate solution	%
Ta	Temperature in the test room	°C
Tb	Temperature of the water bath	°C
WVP	Water vapour permeability of the specimen	g/m²⋅Pa⋅h
WVP app	Apparatus water vapour permeability	g/m²⋅Pa⋅h