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IRISH STANDARD

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National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
http://www.nsai.ie

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SELF ADHESIVE TAPES - MEASUREMENT OF WATER VAPOUR TRANSMISSION IN A WARM HUMID ATMOSPHERE

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Descriptors: adhesive tapes, tests, vapour transmission, water vapour, fluid-tightness tests, damp heat tests

English version

Self adhesive tapes - Measurement of water vapour transmission in a warm humid atmosphere

Rubans auto-adhésifs - Mesure de la transmission de vapeur d'eau en atmosphère chaude et humide

Klebebänder - Messung der Wasserdampfdurchlässigkeit in feuchtwarmer Atmosphäre

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Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 253 "Self adhesive tapes", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by February 1997, and conflicting national standards shall be withdrawn at the latest by February 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This European standard gives :

- Annex A (normative) Measurement of water vapour transmission in a warm humid atmosphere for adhesive tape less than 50 mm width ;

- Annex B (informative) Bibliography

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1 Scope

This standard specifies the method to determine the mass of the water vapour transmitted through the adhesive tape under specific test conditions.
Details of the test method depend upon the width of the adhesive tape under test. For adhesive tapes less than 50 mm width it is necessary to use Annex A (normative).

When test pieces below 50 mm wide are used (as will be common) together with the smaller dry box the precision of this test may be reduced due to undesired moisture transmission at the adhesive seal. This part of the method should therefore be considered to give only approximate values.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from others publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 483 Plastics - Small enclosures for conditioning and testing using aqueous solutions to maintain relative humidity at constant value

ISO 3310-1 Test sieves - Technical requirements and testing - Part 1 : Test sieves of metal wire cloth

3 Definition

For the purposes of this standard the following definition applies :

water vapour transmission rate : The mass of water vapour passing through a unit area of adhesive tape in unit time under prescribed conditions of humidity and temperature.

4 Principle

The adhesive tape is used to separate the humid atmosphere of relative humidity of 93 % ± 2 % contained in an outer vessel from the "dry" atmosphere contained in a metal box, the adhesive side of the adhesive tape facing the "dry" atmosphere.

The increase in mass of the contents of the metal box due to the passage of the water vapour through the adhesive tape is measured. The water vapour transmission of the adhesive tape is expressed as an increase in mass of the box assembly per unit of time per unit area of the opening in the box for a given period of exposure of the test piece to water vapour.

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