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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 26253-2010

**Determination of water vapour transmission rate for
plastics-film and sheeting -- Infrared detection sensor method**

塑料薄膜和薄片水蒸气透过率的测定 红外检测器法

(English Translation)

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Foreword

This revised standard adopts ISO 15106-2:2003 "Plastics film and sheet water vapor permeability test methods - Part 2. Infrared detection Detector Law "(in English).

This standard adopts ISO 15106-2:2003 when, taking into account China's national conditions made some changes. The standards listed in Appendix A Reg number and ISO 15106-2:2003 reg control list number, is given in Appendix B of this standard and ISO 15106-2:2003 Differences and technical reasons list for reference.

This standard and ISO 15106-2:2003 standard compared, the main differences are as follows.

- On the "3 Terms and definitions" in the reference test film redefined;
- The "7 Instrument" in the air to the carrier gas (air or nitrogen);
- To the instrument schematic representation framework;
- On the "9 Steps" appropriate deletion and modification.

The Standard Appendix A and Appendix B are informative.

The standard proposed by China National Light Industry Council.

This standard by the National Standardization Technical Committee of plastic products.

This standard was drafted. Shanghai Food and Drug Packaging Materials Testing Institute, National Plastic Products Quality Supervision and Inspection Center (Beijing).

1 Scope

This standard specifies the test method for determination of infrared detector water vapor transmission rate.

This standard applies to plastic film, plastic-containing measuring multilayer composite film, sheet materials such as water vapor transmission rate.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6672 plastic film and sheet thickness measurement of the mechanical measurements (GB/T 6672-2001, idt ISO 4593:1993)

3 Terms and Definitions

The following terms and definitions apply to this standard.

The water vapor permeability watervapourtransmissionrate Under specified test conditions, the amount of water vapor per unit area of the sample through the test unit time to reach equilibrium.

NOTE: The standard transmission rate of water vapor in the definition of GB/T 1037-1988 water vapor transmission rate of the definition of the meaning is the same, the water vapor transmission rate (amount) 24 hours in units of grams per square meter $[g/(m^2 \cdot 24h)]$.

Reference test film referencetestspecimen Under certain test conditions, the water vapor permeability are known or obtained by the water vapor permeability cup method test weighing diaphragm.

Principle 4

When a sample is placed in the test chamber, the test sample chamber separated into two chambers. Samples of low humidity chamber side, the other side of the humidity chamber, which is filled with water Vapor and the temperature is known. Because there is a certain humidity difference, water vapor permeability to humidity sample from the humidity chamber through the chamber, carried by the carrier gas to IR Detector produces a certain amount of electrical signal when the test reaches a steady state, the electrical output of the calculated sample water vapor permeability.

5 Sample

5.1

Samples should be representative, wrinkles, creases, pinholes. Samples should be of uniform thickness, the area of each piece of the sample should be larger than

the instrument test Area, and can be installed on the instrument seal.

5.2

Unless otherwise specified, each sample is at least three.

5.3

Unless otherwise specified, the thickness of the test should be GB/T 6672, each sample measuring at least three evenly spaced points.

6 Test conditioning

Unless otherwise specified, the sample should be at a temperature of $\pm 23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, relative humidity $50\% \pm 10\%$ of the conditions, the state adjusted by Between at least 4h.

7 Instrument

7.1

meter infrared moisture permeability is shown in Figure 1. Breathable instrument by the humidity control system, the testing chamber, infrared detector, drying tube and flow meter and other groups