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

GB/T 22921-2008

**Paper and board -- Determination of water vapour transmission
rate of sheet materials -- Dynamic sweep and static gas
methods**

纸和纸板 薄页材料水蒸气透过率的测定 动态气流法和静态气体法

(English Translation)

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Foreword

This revised standard adopts ISO 9932:1990 "Paper and paperboard water vapor transmission rate of sheet materials - Determination of dynamic and static airflow Gas Law." this standard and ISO 9932:1990 as compared to the main differences are as follows.

--- International Standard ISO document standard will be referenced in normative references converted to the corresponding national standard, GB/T 450 paper and cardboard to take samples and specimens to the vertical and horizontal, positive and negative determination (GB/T 450-2008, ISO 186:2002, MOD);

--- International Standard ISO document standard will be referenced in normative references converted to the corresponding national standard, GB/T 10739 paper, paperboard and pulp sample processing and testing standard atmospheric conditions (GB/T 10739-2002, eqv ISO 187.

1990);

--- Remove the ISO 9932:1990 in Appendix C.

This standard Annex A, Annex B normative appendix.

The standard proposed by China National Light Industry Council.

The standard paper by the National Standardization Technical Committee (SAC/TC141) centralized.

This standard was drafted. People's Bank of China Printed Science and Technology Institute, China Pulp and Paper Research Institute.

1 Scope

This standard specifies the general method for the determination of sheet materials with dynamic or static gas airlaid method water vapor permeability.

This standard applies to the determination of a thickness not exceeding 38mm, inner water vapor transmission rate at $0.05\text{g}/(\text{m}^2 \cdot \text{d}) \sim 65\text{g}/(\text{m}^2 \cdot \text{d})$ range material.

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 450 and take samples to an aspect of paper and paperboard samples, positive and negative determination (GB/T 450-2008, ISO 186.

2002, MOD)

GB/T 10739 paper, paperboard and pulp sample processing and testing standard atmospheric conditions (GB/T 10739-2002, eqv ISO 187.

1990)

ISO 2528:1995 water vapor transmission rate of sheet materials - Gravimetric (dish) method

3 Terms and Definitions

The following terms and definitions apply to this standard.

Under certain conditions of temperature and humidity, water vapor mass per unit time through unit area of \u200b\u200bspecimen, in grams per square meter per day $[\text{g}/(\text{m}^2 \cdot \text{d})]$ FIG.

Low relative humidity chamber side measurement.

Test chamber relative humidity higher side.

4.1 Principle

The sample was mounted in the measurement chamber, the sample measurement chamber cavity into wet and dry chamber. Among them, the relative humidity chamber known wet, dry dry purge chamber Dry gas stream (carrier gas). Sensors detect the carrier gas entrained amount of water vapor to give a reading. The readings or the readings

calculated after conversion Value, that is, water vapor transmission rate of the sample.

4.2 Instrument

4.2.1

Determination of the chamber, the sample can be certain area is sandwiched between the two chambers, a dry purge gas chamber (dry chamber), while the other chamber is Victoria Holding high relative humidity (wet chamber) (see Fig. 1).