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**Hygrothermal performance of building materials and
products - Determination of water-vapour
transmission properties - Box method**

(ISO 21129:2007, IDT)

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard uses translation method to make it identical with ISO 21129:2007 *Hygrothermal performance of building materials and products - Determination of water-vapour transmission properties - Box method*. There are following editorial changes between this Standard and ISO 21129:2007:

- modified “this International Standard” to “this Standard”;
- added table title of Table 1; modified Table 1 in the ISO standard to Table 2;
- added GB/T 20312-2006 and ISO 12572:2001 in Bibliography to Clause 2.

This Standard was proposed by China Building Materials Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Insulation Material of Standardization Administration of China (SAC/TC 191).

The drafting organizations of this Standard: Nanjing Glass Fiber Research & Design Institute Co., Ltd., National Glass Fiber Products Quality Supervision and Inspection Center.

Main drafters of this Standard: Zhang You, Wang Jiaqing, Ge Dunshi, Cui Jun, Zhang Jianhong, Chen Lihua, Tang Jian, Jiang Pengfei, Yang Chao.

Hygrothermal performance of building materials and products - Determination of water-vapour transmission properties - Box method

1 Scope

This Standard specifies a box method for determining the water-vapour permeability of building materials. The box method is used primarily to measure the water-vapour permeance of materials that have low water-vapour resistance, in which the influence of the surface-humidity transmission-resistance cannot be ignored.

NOTE Materials with low water-vapour resistance includes those with no greater than $1.8 \times 10^9 \cdot \text{m}^2 \cdot \text{S} \cdot \text{Pa}/\text{kg}$ of resistance [water vapour permeability coefficient of $5.5 \times 10^{-8} \text{ kg}/(\text{m}^2 \cdot \text{S} \cdot \text{Pa})$ or above].

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9346 *Hygrothermal performance of buildings and building materials - Mass transfer - Physical quantities and definitions*

GB/T 20312-2006 *Hygrothermal performance of building materials and products - Determination of hygroscopic sorption properties (ISO 12571:2000, IDT)*

ISO 12572:2001 *Hygrothermal performance of building materials and products Determination of water vapour transmission properties*

3 Terms, definitions, symbols and units

3.1 Terms and definitions

For the purposes of this document, the definitions given in ISO 9346 and the following apply.

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