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GB/T 42529-2023

**Evaluation requirements for moisture conduction and phase
change respiratory function of new wall materials**

新型墙体材料湿传导及相变呼吸功能的评价要求

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Foreword

This document was issued on 23 May 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 December 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

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Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

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Moisture conduction and phase change breathing function of new wall materials evaluation requirements

1 Scope

GB/T 42529-2023 governs the way the moisture conduction and phase change breathing function of new wall materials is measured and rated. Clause 4 fixes the evaluation indicators, gathered in a single table; Clause 5 sets out the test method; Clause 6 turns the measured results into an evaluation; and Clause 7 gives the judgment rule that decides whether a product may be called humidity-regulating at all. Terms and definitions settle what moisture conduction means in this context, and the document carries no normative references, so the procedure stands on its own. A wall that buffers humidity is sold on a claim that is easy to make and hard to check. A material that takes up water vapour when a room is humid and gives it back when the air dries can hold down condensation, mould growth and the load on mechanical ventilation; a material that takes up water and never releases it does the opposite, keeping moisture inside the envelope where it damages finishes and insulation. A shared test and a shared pass mark are what separate the two claims. For makers of blocks, boards and panels sold as humidity-regulating, for the laboratories that test them, and for the designers of industrial and civil buildings who write the claim into a specification.

This document specifies the evaluation requirements, evaluation methods and judgments for the moisture conduction and phase change breathing functions of new wall materials.

This document is applicable to the detection and evaluation of the temperature and

humidity regulation functions of new wall materials for industrial and civil buildings.

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

moisture conduction

The process by which new wall materials absorb and release moisture when in contact with the external environment.

3.2

Due to the influence of humidity diffusion, temperature and other factors, the new wall material releases the absorbed liquid water to the external environment as gaseous water vapor.

Ability.

3.3

general mode generalmode

The temperature and humidity conditions set for the design and evaluation of the moisture conduction performance and phase change breathing performance of new wall materials in general environments, usually

The temperature fluctuation range is usually set at 5°C~60°C, and the relative humidity fluctuation range is 20%~95%.

3.4

comfort mode comfortmode

The temperature and humidity conditions set for the design and evaluation of the moisture conduction performance and phase change breathing performance of new wall materials in a human livable environment

Components, usually set the temperature at (23+/-2)°C, and the relative humidity at (50+/-10)%.

3.5

The temperature when the indication value of the temperature sensor on the upper and lower surfaces of the sample is consistent with the indication value of the temperature

sensor in the temperature and humidity control chamber.

3.6

Equilibriummoisture

The relative humidity when the indication value of the humidity sensor on the upper and lower surfaces of the sample is consistent with the indication value of the humidity sensor in the temperature and humidity control chamber.

4 Evaluation indicators

The evaluation index requirements for phase change breathing function of new wall materials are shown in Table 1.