

ICS 91.060.50

CCS P 32



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

GB/T 29737-2013

**Classification and test method for the sand and dust resistance
of building external windows and doors**

建筑门窗防沙尘性能分级及检测方法

Issued on: September 18, 2013

Implemented on: June 1, 2014

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China. This standard by the national building curtain wall windows and doors Standardization Technical Committee (SAC/TC448) centralized. This standard is drafted by: China Academy of Building Research, Building Research Institute of Guangdong Province, Shenzhen City Mountain consult a curtain wall technology Limited, Shanghai Jianke Inspection Ltd., Beijing Polytechnic University, Henan Academy of Building Research Co., the State Building Materials Testing Heart, Beijing Jiayu Fenestration Co., Ltd., Guangzhou aluminum Decoration Engineering Co., Ltd. Beijing river wall, Beijing gold Vig curtain wall decoration works to a limited liability company, the State Building Materials Industry Building Hardware Plumbing Products Quality Supervision and Testing Center, Guangdong Kennedy Long Metal Products Co., Ltd., Zhengzhou Zhongyuan Applied Technology Research and Development Co., Ltd., Guangzhou Zhubang Building Materials Development Co., Ltd., Beijing Meritor supplies limited liability company. The main drafters of this standard. Wang Hongtao, Liu Bin, Shi Man Cheung, DU Ji Yu, Xu Qin, SUN Shi Bing, Jiwei Ming, Liu Haibo, Zhang Guofeng, Zhao autumn, Chen Shuo, Yuan Yao Deng Guizhi, Duwan Ming, Choi, Wu suggestions, Zhongtie Zhu.

Sandstorm is a common weather phenomenon of the wind blowing sand and dust will be a lot of ground, so that the air is poor, horizontal visibility is less than 1km weather phenomenon. Sandstorm will lead to sand, dust pervasive, air pollution, and can cause serious indoor air pollution. According to sandstorms Ground level when visibility can be divided into dust, blowing sand, dust storms, strong storms, exceptionally strong sandstorm five. Sandstorm is a strong severe weather Gas, can cause houses to collapse, traffic disruption or interruption of the power supply, fire, human and animal casualties and other hazards; natural cause environmental pollution, destruction of crops, Causing serious

damage to the national economy and people's lives and property. China is one of the world's frequent sandstorms, dust storms and Strong storms usually occur in the northern part of North China, it is exceptionally strong sandstorm-prone country in the northwest. Unlike building doors and windows anti-dust performance of windows and doors airtight performance in 7106 described the current GB/T . For the difference between the two Doors and windows doors and windows airtight performance evaluation of the ability to prevent air infiltration, using 10Pa pressure (wind class 3) as the amount of air infiltration Review Price index; doors anti-dust performance in wind speed exceeds 24m/s (wind above 10) The exceptionally strong sandstorm occurs, windows and doors to prevent dust into The capacity of the room. Under normal use, building doors and windows with good airtight performance is not necessarily a good anti-dust properties. The standard Classification and registration provisions of the detection windows and doors in the very state anti-dust performance of wind pressure. Building doors and windows airtight performance testing and evaluation Given method can not replace inspection and evaluation method specified in this standard. Building doors and windows anti-dust performance classification and test methods

1 Scope

China's national classification and test method for the sand and dust resistance of building external windows and doors. It specifies the performance grades for resistance to sand and dust penetration and the laboratory method by which a window or door is tested and graded. Most window performance standards address water, wind and air: the water tightness under driving rain, the resistance to wind load, and the air permeability that determines the heat loss. This one addresses a fourth thing that matters across a large part of China and almost nowhere in the countries whose standards the others derive from. In the north and north-west, dust storms carry fine sand for hundreds of kilometres, and a building in Beijing, Lanzhou or Urumqi receives it several times a year. Dust that penetrates a window does not merely dirty the room: it deposits on and inside everything, it damages electronics and machinery, it is a respiratory irritant, and in a hospital, a laboratory or a semiconductor plant it is a process failure. The occupants respond by sealing windows with tape, which defeats the ventilation the building was designed with. So a window's ability to keep sand out is a performance property worth measuring and grading, in the same way its water tightness is. The difficulty is that dust penetration is not the same as air leakage. A window that is airtight is dust-tight, but a window with a given air permeability may or may not pass dust depending on where the leakage path is and how the pressure fluctuates - and dust storms come with wind, so the pressure is not steady. The standard therefore specifies a test that reproduces the condition: a defined dust of defined particle size, a defined concentration and air velocity, a defined pressure cycle, and the measurement of what gets through. Issued on 18 September 2013 and in force since 1 June 2014.

This standard specifies the terms and definitions doors and windows and dust sand

prevention performance properties, classification, detection means for detecting preparation, detection step, Evaluation of results and test report. This standard applies to classification and laboratory building external windows and doors anti-dust properties. Object detection is limited to the outer doors specimen itself, not Involving joints and outer doors and envelope structures.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 6921 Determination of the concentration of atmospheric particulates

GB/T 7106 building external doors and windows airtight, watertight, wind pressure performance classification and test methods

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Anti-dust performance sandandddustresistanceperformance Sediment Control performance and dustproof performance in general.

3.2 Sediment Control Performance sandresistanceperformance The outer doors normally closed state, in the role of sand to prevent sand entering the capacity of the room.

3.3 Dustproof performance dustresistanceperformance External doors and windows closed when the normal state, in the wind and dust effects, the ability to prevent dust entering the chamber.

4.1 Performance Indicators

4.1.1 using a pressure difference of 400Pa, in 15min doors open through the outer gap length in the quality of the indoor unit of sand (M) as Sediment Control performance is graded index.

4.1.2 using a pressure difference of 400Pa when, within 15min through the outer door into the room unit area respirable mass particulate matter (C) Classification as dustproof performance indicators.

4.2 Performance Grading

4.2.1 building doors and windows and sediment retention performance rating indicators in Table 1.