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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 24498-2025

Replacing GB/T 24498-2009

Gaskets for doors, windows and curtain walls of buildings

建筑门窗、幕墙用密封胶条

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1 Scope

This Document specifies the classification, code and signing, technical requirements, test methods, inspection rules and marking, packaging, transportation and storage of gaskets for doors, windows and curtain walls of buildings.

This Document is applicable to the design, production and inspection of gaskets for doors, windows and curtain walls of buildings.

2 Normative References

GB/T 250

GB/T 528-2009

GB/T 529-2008

GB/T 531.1

GB/T 533-2008

GB/T 1682

GB/T 2828.1

GB/T 3512

GB/T 3672.1-2002

GB/T 3672.2-2002

GB/T 6343

GB/T 7759.1-2015

GB/T 7762

GB/T 8627

GB/T 9881-2008

GB/T 10707

GB/T 16422.2-2022

GB 16776-2005

GB/T 18173.3-2014

GB/T 20739

GB/T 21282-2007

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 9881-2008 and the following apply.

3.1 Gaskets

The seal, installed in the opening or fixed part of doors, windows and curtain walls, has a sealing function.

5.4.10 Brittle temperature

The specimen of the coated sponge complex weatherstrip shall not have cracks or breaks after the test at -20 °C.

5.4.11 Repeated water absorption performance

After the water absorption test of the coated sponge complex weatherstrip is repeated for 4 cycles, the product shall meet the following requirements.

a) The mass change rate is no greater than 5%;

b) The deflection recovery is no less than 90%;

c) The compression force change value is no greater than 30%.

5.4.12 High and low temperature resistance

After the high and low temperature test of the coated sponge complex weatherstrip is repeated for 4 cycles, the product shall meet the following requirements.

a) The deflection recovery is no less than 90%;

b) The compression force change value is no greater than 30%.

5.4.13 Fatigue resistance

After 200,000 fatigue tests on the coated sponge complex weatherstrip, the product shall meet the following requirements.

a) The deflection recovery is no less than 90%;

b) The compression force change is no greater than 30%;

c) The surface coating film shall not be damaged, fractured or cracked; and the coating film shall not be separated from other composite materials.

5.4.14 Compression force

The compression force shall meet the sealing requirements of doors, windows and curtain walls.

The classification shall be agreed upon by the supplier and the purchaser according to the needs.

The compression force (DN) classification shall comply with the provisions of Table 14.

The test shall be performed in accordance with the provisions of GB/T 528-2009, using a type 1 dumbbell-shaped specimen (sponge rubber extruded foam sheet), and the test speed is 500 mm/min±50 mm/min.

6.2.3 Tear strength

The test shall be performed in accordance with the provisions of GB/T 529-2008, using a right- angle, uncut specimen.

6.2.4 Compression permanent deformation

The test shall be performed in accordance with the provisions of GB/T 7759.1-2015, using type A specimen, test temperature 100 °C (thermoplastic elastomer test temperature 70 °C), test time 220.5 0 h, specimen compression (25±2)%.

6.2.5 Aging in hot air

The test shall be performed in accordance with the provisions of GB/T 3512; test temperature 100 °C, test time 168 h ± 1 h. Prepare and test the specimens according to the hardness and tensile strength requirements.

6.2.6 Hardness change

Put the specimen (with diameter no less than 30 mm, thickness no less than 6 mm) in a constant temperature container at -20 °C ±2 °C, 0 °C ±2 °C, 23 °C ±2 °C, 70 °C ±2 °C; take it out after 2 h±0.25 h; measure the hardness within 10 s according to the method specified in GB/T 531.1;

and calculate the hardness difference of each temperature section according to Tables 3, 4, 6, 7.

6.2.7 Low temperature brittleness

The test shall be performed according to the provisions of GB/T 1682.

6.2.8 Oxygen index

The test shall be performed according to the provisions of GB/T 10707.

6.2.9 Vertical combustion performance

The test shall be performed according to the provisions of GB/T10707.

6.2.10 Smoke density

The test shall be performed according to the provisions of GB/T 8627; the specimen size is (25.4±0.3)mm x (25.4±0.3)mm x (6.2±0.3)mm.

6.2.11.1 Volume swelling ratio

The test shall be performed according to the provisions of Appendix A in GB/T 18173.3-2014.

6.2.11.2 Repeated immersion test

The test shall be performed according to the provisions of 6.3.5 in GB/T 18173.3-2014.

6.3 Product appearance

Visually inspect the product appearance quality under natural light or equivalent artificial light source at a distance of 0.3 m.

6.4 Product dimension tolerance

Take a 2 mm to 3 mm thick cross-section test piece of the product and test it with a non-contact measuring instrument with corresponding graduation value (such as a projector or scanner that can magnify 5x or 10x).