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

GB/T 13477.19-2017

**Test method for building sealants -- Part 19: Determination of
change in mass and volume
(English Translation)**

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Foreword

GB/T 13477 "Building Seal Material Test Method" is divided into 20 parts.

- Part 1. Requirements for test substrates;
- Part 2. Determination of density;
- Part 3. Methods for determining the extrudability of sealing materials using standard instruments;
- Part 4. Determination of the extrusion properties of single packings of original packaging;
- Part 5. Determination of dry time;
- Part 6. Determination of liquidity;
- Part 7. Determination of low temperature flexibility;
- Part 8. Determination of tensile bondability;
- Part 9. Determination of tensile bondability after immersion;
- Part 10. Determination of adhesion and elongation;
- Part 11. Determination of adhesion after immersion;
- Part 12. Determination of adhesion after stretching - compression cycle at the same temperature;
- Part 13. Determination of adhesion after cold drawing - hot pressing;
- Part 14. Immersion and stretching - determination of adhesion after compression cycle;
- Part 15. Determination of adhesion after exposure to heat through glass, artificial light source and water;

- Part 16. Determination of compression characteristics;
- Part 17. Determination of elastic recovery rate;
- Part 18. Determination of peel adhesion;
- Part 19. Determination of changes in mass and volume;
- Part 20. Determination of pollution.

This part is part 19 of GB/T 13477.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

Part 1. GB/T 13477.19-2002 "Test methods for building sealants - Part 19. Determination of changes in mass and volume Set ", compared with GB/T 13477.19-2002, the main technical changes are as follows.

- modified scope, increased the expression of non-applicable content (see Chapter 1, Chapter 1 of the 2002 edition);
- increased the expression of the balance in the test apparatus and the level of the test reagent, and removed the specific balance (see 5.5 and 5.1, 2002) 5.5, 5.6 and 5.7);
- modified specimen preparation (see Chapter 6, Chapter 6 of the 2002 edition);
- modified the test procedure (see Chapter 7, Chapter 7 of the 2002 edition);
- modified the results of the calculation, an increase of the results that (see Chapter 8, 2002 edition of Chapter 8);
- modified the test report [see column 9 a), c), d) and e), chapter 9 b) and c) of the 2002 edition.

This part uses the translation method equivalent to ISO 10563.:2005 "building structure sealing material quality and volume change determination".

In this part of the normative reference to the international documents have a consistent correspondence between the following documents.

Glossary of Building Sealants (ISO 6927. 1981, NEQ) GB/T 14682-2006.

This section makes the following editorial changes.

- in line with this series of standards, the standard name to "building seal material test method Part 19. quality and volume changes of the determination ";
- Removed "(see 6.2)" in column eart. E) of ISO 10563.:2005;
- in the ISO 10563.:2005 Chapter 9 item e), change the "single change in the quality of each specimen and volume change" to "every test Mass change and/or volume change.

This section is proposed by the China Building Materials Federation.

This part of the National Light and Decoration Building Materials Standardization Technical Committee (SAC/TC195) centralized.

This part of the drafting unit. Henan Building Materials Research and Design Institute Co., Ltd., Guangzhou Baiyun Chemical Industry Co., Ltd., Guangzhou Gao Shi Industrial Co., Ltd., Chengdu Silicone Technology Co., Ltd., Zhengzhou Zhongyuan Applied Technology Research and Development Co., Ltd., Guangdong New Exhibition Chemical New Materials Co., Ltd., Guangdong Pu Sida sealed viscose Co., Ltd., Jiangmen bright light viscose Co., Ltd.

1 Scope

This part of GB/T 13477 specifies the method for determining the quality change and volume change of the sealing material for building joints.

This part does not apply to self-leveling seals.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

ISO 6927 Building Structures Seal Material Terms
(Buildingconstruction-Jointingproducts-Sealants-Vocabulary)

3 Terms and definitions

The terms and definitions defined in ISO 6927 apply to this document.

4 Principle

The sealing material is filled with the metal ring to form the test piece, placed at room temperature and high temperature to handle, measure and record the temperature before and after the test piece quality and/or the difference in volume.

5 Utensils and materials

5.1

Corrosion-resistant metal ring. the size of about 34mm diameter, 30mm, high 10mm. The ring is fitted with a hook or spring for weighing Hanging on the thread.

5.2

Anti-blocking material. used to prepare test pieces, such as wet paper.

5.3

Maintenance tank. can control the temperature $(23 \pm 2) ^\circ\text{C}$ and relative humidity $(50 \pm 5)\%$.

5.4

Blow drying oven. can control the temperature $(70 \pm 2) ^\circ\text{C}$.

5.5

balance. scale value of 0.01g, used to weigh the specimen in the air and in the water quality.

5.6

Test liquid. temperature $(23 \pm 2) ^\circ\text{C}$, consisting of water and less than 0.25% (mass fraction) of low foaming surfactant. for Water-sensitive sealing material, should use the experimental grade 2,2,4-trimethylpentane (isooctane).

5.7

Containers. used to soak the test piece in the test liquid.

6 Preparation of test pieces

6.1

The sealing material and the metal ring shall be placed at $(23 \pm 2) ^\circ\text{C}$, and each test piece shall be prepared for each test property.

6.2

Use the balance (5.5) to weigh the mass (m_1) of each metal ring in the air. For volume determination, it should also be weighed in test liquid (5.6)