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

GB/T 13477.20-2017

**Test method for building sealants -- Part 20: Determination of
staining**

建筑密封材料试验方法 第20部分：污染性的测定

(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 20 of GB/T 13477.

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

This part of the replacement of GB/T 13477.20-2002 "Building sealant test method Part 20. Determination of pollution", and GB/T 13477.20-2002 compared to the main technical changes are as follows.

- modified the scope and removed the contents of the solvent-based sealing material (see Chapter 1, Chapter 1 of the 2002 edition);
 - modified normative reference documents (see Chapter 2, Chapter 2 of the 2002 edition);
 - modified the principle (see Chapter 4, Chapter 4 of the 2002 edition);
 - modified test apparatus (see Chapter 6 and Chapter 1, Chapter 6 of the 2002 edition);
 - modified the preparation of the test piece and removed the contents of the solvent-based sealing material (see Chapter 7, 2002, 7.1 and 8.1)
 - modified the test steps, removed the contents of the solvent-based sealing material, increased the compression test parameters of the corresponding relationship between the table and non-compression test content (see Chapter 8 and Table 1, 2002, 7.2 and 8.2);
 - Increased pollution assessment, maximum and minimum contamination width and depth measurements, test report sample sheets (see Chapter 9, Figure 2, Figure 3 and Table 2);
- (A), c), d), e), f), g), h), i), 2002,), E) and 9.2), b), c), d), e)].

This part uses the re-drafting method to modify the use of ISO 16938-1.:2008 "building structure for the sealing of the sealing material on the porous substrate Determination of Contaminants Part 1. Compression Tests "and ISO 16938-2.:2008" Building Structures Sealing materials for seams for porous materials Determination of contamination - Part 2. Non - compression test.

This section has some structural changes compared to ISO 16938-1.:2008 and ISO 16938-2.:2008, which are listed in Appendix A Part and ISO 16938-1.:2008 and ISO 16938-2.:2008 chapter number comparison list.

This section has technical differences compared to ISO 16938-1.:2008 and ISO 16938-2.:2008, and the terms of these differences have been by identifying the vertical

single line (-) in its outer blank position, Appendix B gives the corresponding technical differences and their causes Table.

This part also makes the following editorial changes.

- the name of the standard has been modified to "the seams for the sealing material on the determination of porous substrate contamination Part 1. compression Test "and" Sealing materials for seams The determination of the contamination of porous substrates Part 2. Non-compressive tests "Two standard the name of the merger is amended to "pollution determination";
- "the International Standard" is replaced by the words "part of GB/T 13477" or "this part";
- the preamble of ISO 16938-1.:2008 and ISO 16938-2.:2008 was deleted;
- delete the notes in ISO 16938-1.:2008 and ISO 16938-2.:2008 5.2;
- "500h" in item 8.2.4 of Article 169 of ISO 16938-1.:2008 was deleted;
- Removed "500h" from item 8.4 of item ISO d.

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., Zhengzhou the original application of Technology Research and Development Co., Ltd., Chengdu Silicon Technology Co., Ltd., Guangzhou City, Gao Shi Industrial Co., Ltd., Guangdong New Exhibition Chemical New Materials Co., Ltd., Guangdong Pu Sida sealed viscose Co., Ltd., Jiangmen bright light viscose Co., Ltd.

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This part of the previous version of the standard to replace the release of the situation.

--- GB/T 13477-1992, GB/T 13477.20-2002.

Test methods for building sealants Part 20. determination of contamination

1 Scope

This part of GB/T 13477 specifies the method for determining the contamination of building sealants.

This part applies to the determination of the contamination of the porous substrate (such as marble, limestone, gravel or granite) by the sealing material in the construction joint, where Test Method A is suitable for the determination of contaminants under compression

conditions. Test Method B is applicable to the determination of contaminants under non-compressed conditions test.

Note: This test method is based on the sealing material within the material exudation of the porous substrate surface of the possibility of early pollution evaluation, the test results only represent Test sealing materials and test substrates can not be used to infer other formulations of sealing material or other porous substrates. Accelerated test period, if sealed the material does not cause contamination or discoloration of the substrate, does not mean that the test seal material after long-term use, will not make the porous test substrate pollution or discoloration.

The experience of multiple countries shows that the use of similar test methods to compress the specimen can further accelerate the generation of pollution.

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.

GB/T 13477.15-2017 Test methods for building sealing materials - Part 15. Artificial light sources and water through heat through glass Determination of adhesion after exposure (ISO 11431.:2002, MOD) Glossary of Building Seal Materials GB/T 14682 GB/T 16422.2-2014 Plastics laboratory exposure method for exposure to light sources - Part 2. Xenon arc lamps (ISO 4892-2.:2006, IDT) GB/T 16422.3-2014 Plastics laboratory - Test method for exposure of light sources - Part 3. Fluorescent ultraviolet lamps (ISO 4892-3. 2006, IDT)

3 Terms and definitions

GB/T 14682 Definitions of terms and definitions apply to this document.

4 Principle

This test method measures the visible contamination of the porous substrate by the seams of the sealing material under specified conditions.

The sealing material is filled between two porous substrates to form a test piece. The test piece is compressed (or not compressed) and subjected to heat and/or low temperature and /or light radiation accelerated aging treatment, aging test after the evaluation of test pieces. Measure the maximum and minimum contamination by visualizing the changes in the surface of the substrate Dyeing width and pollution depth, recording the outer surface of the substrate and the body of the internal pollution phenomenon.

Standard test conditions Laboratory standard test conditions. temperature $(23 \pm 2) ^\circ\text{C}$, relative humidity $(50 \pm 5)\%$.