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

GB/T 16777-2008

**Test methods for building waterproofing coatings
(English Translation)**

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Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Standard test conditions...	5
4 Coating film preparation...	6
5 Solid content...	8
6 Heat resistance...	9
7 Bond strength...	10
8 Bond strength on wet substrate...	16
9 Tensile properties...	17
10 Tear strength...	21
11 Aging at elongation...	22
12 Heating stretch rate...	23
13 Low temperature flexibility...	25
14 Low temperature bendability...	27
15 Impermeability...	29
16 Drying time...	30

Foreword

The degree of consistency between this Standard and JIS A6021-2000 "Liquid-applied Compounds for Waterproofing Membrane Coating Of Buildings" is non-equivalent.

This Standard replaces GB/T 16777-1997 "Test methods for building waterproof coatings".

The main differences between this Standard and GB/T 16777-1997 are as follows. In this Standard.

- Film preparation is added. The film-forming method for water-emulsion film is adjusted. The items of bond strength and tear strength on wet substrate are added (Chapters 4, 8 and 10 of this Edition);
- The test methods of solid content and drying time have been adjusted (Chapters 4

and 12 of Edition 1997, Chapters 5 and 16 of this Edition);

- Method A for bond strength is added (Chapter 6 of Edition 1997, Chapter 7 of this Edition);
- The extension test items are deleted (Chapter 7 of Edition 1997);
- Ultraviolet treatment is deleted from the tensile test (Chapter 8 of Edition 1997, Chapter 9 of this Edition);
- Low-temperature flexibility is divided into low-temperature flexibility and low-temperature bendability (Chapter 10 of Edition 1997, Chapters 13 and 14 of this Edition).

This Standard was proposed by China Building Materials Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Lightweight and Decorative Building Materials of Standardization Administration of China (SAC/TC 195).

Main drafting organizations of this Standard. Suzhou Waterproof Material Research and Design Institute of China Chemical Building Materials Corporation.

The drafting organizations of this Standard. Shanghai Academy of Building Research (Group) Co., Ltd., Beijing Academy of Building Materials Science, Beijing Oriental Yuhong Waterproof Technology Co., Ltd., Sichuan Hongyuan Waterproof Engineering Co., Ltd., Dalian Xiyang Waterproof Engineering Group Co., Ltd., Shanghai Hui Lai Paint Co., Ltd.

This Standard entrusts Suzhou Waterproof Material Research and Design Institute of China Chemical Building Materials Corporation to be responsible for interpretation.

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This Standard entrusts Suzhou Waterproof Material Research and Design Institute of China Chemical Building Materials Corporation to be responsible for interpretation.

This Standard was first issued in 1997.

Test methods for building waterproofing coatings

1 Scope

This document specifies the standard test conditions, coating film preparation, solid content, heat resistance, bond strength, bond strength of wet substrate, tensile properties, tear strength, aging at constant elongation, heating expansion rate of architectural waterproof coatings, low temperature flexibility, impermeability, drying time and other performance test methods.

This Standard applies to building waterproof coatings.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 328.10-2007, Test methods for building sheets for waterproofing - Part 10.

Bitumen, plastic and rubber sheets for waterproofing - Water tightness

GB/T 528, Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties (GB/T 528-1998, ISO 37:1994 eqv)

3 Standard test conditions

Laboratory standard test conditions. temperature is $(23\pm 2)^{\circ}\text{C}$; relative humidity is $(50\pm 10)\%$.

4.2.1 Before the test, the mold frame, tools and coating shall be placed under the standard test conditions for more than 24h.

4.2.2 Weigh the required amount of test sample. Ensure the final film thickness as $(1.5$

$\pm 0.2)$ mm.

4.2.3 Check the appearance of the coating film. Cut the test piece according to the

provisions in Table 2 from the coating film with a smooth surface and no obvious bubbles.

5.2 Test steps

Stir the sample (no diluent added for solid content test) well. Take (6 ± 1) g of the sample and pour it into a dry and weighed Petri dish (m_0) and flatten the bottom. Immediately weigh (m_1).

5.3 Result calculation

The solid content is calculated according to formula (1).

5.4 Test report

The test report shall contain the following information.

6.1.2 Aluminum plate. the thickness is not less than 2mm; the area is greater than 100mmx50mm; there is a small hole in the middle and upper part, which is convenient for hanging.

6.2 Test steps

After stirring the sample evenly, apply the sample in 2~3 times according to the requirements of the manufacturer (the interval between each time shall not exceed 24h) on the cleaned aluminum plate. The coating area is 100mmx50mm.

6.3 Result evaluation

After the test, all test pieces shall not flow, slide, or drip. There are no dense bubbles on the surface of the test piece.

6.4 Test report

The test report shall contain the following information.