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

GB/T 328.25-2007

**Test methods for building sheets for waterproofing -- Part 25:
Bitumen, plastic and rubber sheets for
waterproofing-resistance to static loading
(English Translation)**

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Foreword

GB/T 328 "Test Methods for Building Sheets for Waterproofing" is divided into the following 27 parts:

- Part 1: Bitumen Plastic and Rubber Sheets for Waterproofing - Rules for Sampling;
- Part 2: Bitumen Sheets for Waterproofing - Visible Defects;
- Part 3: Plastic and Rubber Sheets for Waterproofing - Visible Defects;
- Part 4: Bitumen Sheets for Waterproofing - Thickness and Mass per Unit Area;
- Part 5: Plastic and Rubber Sheets for Waterproofing - Thickness and Mass per Unit Area;
- Part 6: Bitumen Sheets for Waterproofing - Length, Width and Straightness;
- Part 7: Plastic and Rubber Sheets for Waterproofing - Length, Width, Straightness and Flatness;
- Part 8: Bitumen Sheets for Waterproofing - Tensile Properties;
- Part 9: Plastic and Rubber Sheets for Waterproofing - Tensile Properties;
- Part 10: Bitumen Plastic and Rubber Sheets for Waterproofing - Watertightness;

- Part 11: Bitumen Sheets for Waterproofing - Flow Resistance at Elevated Temperature;
- Part 12: Bitumen Sheets for Waterproofing - Dimensional stability;
- Part 13: Plastic and Rubber Sheets for Waterproofing - Dimensional Stability;
- Part 14: Bitumen Sheets for Waterproofing - Flexibility at low temperature;
- Part 15: Plastic and Rubber Sheets for Waterproofing - Foldability at Low Temperature;
- Part 16: Plastic and Rubber Sheets for Waterproofing - Exposure to Liquid Chemicals Including Water;
- Part 17: Bitumen Sheets for Waterproofing - Adhesion of Granules;
- Part 18: Bitumen Sheets for Waterproofing - Resistance to Tearing (Nail Shank);
- Part 19: Plastic and Rubber Sheets for Waterproofing - Resistance to Tearing;
- Part 20: Bitumen Sheets for Waterproofing - Resistance to Peeling of Joints;
- Part 21: Plastic and Rubber Sheets for Waterproofing - Resistance to Peeling of Joints;
- Part 22: Bitumen Sheets for Waterproofing - Resistance to Shearing of Joints;
- Part 23: Plastic and Rubber Sheets for Waterproofing - Resistance to shearing of Joints;
- Part 24: Bitumen Plastic and Rubber Sheets for Waterproofing - Resistance to Impact;
- Part 25: Bitumen Plastic and Rubber Sheets for Waterproofing - Resistance to Static Loading;
- Part 26: Bitumen Sheets for Waterproofing - Dissoluble Composite of Membrane (Impregnated and Coated Asphalt Amount);
- Part 27: Bitumen Plastic and Rubber Sheets for Waterproofing - Water Absorption.

This Part is Part 25 of GB/T 328.

This Part is identical to EN 12730:2001 "Flexible Sheets for Waterproofing - Bitumen

Plastic and Rubber Sheets for Roof Waterproofing - Determination of Resistance to Static Loading" (English edition).

Chapter and article numbers of this Part are consistent with those of EN 12730:2001.

In order to make it convenient for use, this Part makes the following editing modifications:

- a) "This European Standard" is changed into "this Part";
- b) "EN 13416" is changed into "GB/T 328.1";
- c) The foreword and normative references of EN 12730:2001 is deleted; the foreword of this Part is re-compiled.

This Part was proposed by China Building Material Industry Association.

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

Chief drafting organizations for this Part: China Chemical Building Material Company Suzhou Waterproof Material Research and Design Institute, and Technical

Test Methods for Building Sheets for Waterproofing -

Part 25: Bitumen Plastic and Rubber Sheets for
Waterproofing - Resistance to Static Loading

1 Scope

This Part of GB/T 328 specifies a test for puncture by static loading for roofing membranes. Mechanical stress on membranes varies from static long-term loads to dynamic short-term loads. This method represents the static category of load where the stress is applied over a period of time.

This Part may also be applicable to waterproofing.

2 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this Part of GB/T 328. For dated references, then subsequent amendments revisions of these publications do not apply. However,

parties who enter into an agreement based on this Part are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 328.1 Test Methods for Building Sheets for Waterproofing - Part 1: Bitumen Plastic and Rubber Sheets for Waterproofing - Rules for Sampling

3 Definition

For the purpose of this Part of GB/T 328, the following definition applies.

Top surface

The upper side of the sheet, as used in situ. It is usually the inside of the roll.

Note: "Surface" in EN 12730:2001 is changed into "Top surface" in this Part.

4 Principle

The test specimens are conditioned at least 24 h at the specified test conditions.

8.1 General

Testing is carried out at a temperature of $(23 \pm 2) ^\circ\text{C}$.

For every test at each loading interval a new test specimen shall be used; and a new polystyrene panel shall be used for the soft support test (see 8.2).

The test specimen is laid on the horizontal support with the surface upwards.

The puncturing tool is positioned at the centre of the test specimen.

The testing is carried out with three parallel test specimens in intervals of loading starting with 5 kg. The load is then increased by steps of 5 kg until perforation occurs, or up to a maximum load of 20 kg. The duration of loading shall be 24 h for each loading interval.

The load is applied carefully, without shock.

After each loading interval the test specimens are examined for a possible puncture by coating the surface where the load has been applied with a soap solution between (7 ± 2) min after the test. A pressure difference of 15 kPa is applied to the area where