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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 24218.5-2016

Textiles -- Test methods for nonwovens -- Part 5: Determination of resistance to mechanical penetration (ball burst method)

纺织品 非织造布试验方法 第5部分：耐机械穿透性的测定（钢球顶破法）

(English Translation)

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Preview: page 1 of 4 shown, 6 in the full document. Complete English PDF, instant download:
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Table of Contents

Foreword
1 Scope
2 Normative reference documents
3 Terms and definitions
4 Principle
5 Instruments

Foreword

GB/T 24218 "Textile nonwovens test method" is divided into the following parts.

- Part 1. Determination of mass per unit area;
- Part 2. Determination of thickness;
- Part 3. Determination of breaking strength and elongation at break (strip method);
- Part 5. Determination of resistance to mechanical penetration (ball top breaking method);
- Part 6. Determination of absorbency;
- Part 8. Determination of liquid penetration time (simulated urine);
- Part 10. Determination of flop;
- Part 11. Determination of overflow;
- Part 12. Determination of compressive absorbability;
- Part 13. Determination of multiple penetration times of liquids;
- Part 14. Determination of moisture content of coating materials;
- Part 15. Determination of breathability;
- Part 16. Determination of impermeability (hydrostatic method);
- Part 17. Determination of water permeability (spray shock method);
- Part 18. Determination of breaking strength and elongation at break (grab method);

Part 101. Determination of resistance to physiological saline (Mason bottle method).

This part is part 5 of GB/T 24218.

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

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This part uses the re-drafting method to modify ISO 9073-5.:2008 "Textile nonwovens test method Part 5.

Determination of penetration of the machine (steel ball top breaking method) ".

There are technical differences between this part and ISO 9073-5.:2008 as follows.

--- simplifies the scope of application of the standard;

- the international standard in the normative reference document is replaced with the corresponding national standard, and references to ISO 186 and ISO 10012 are deleted;

--- removed nonwovens, isokinetic traction tester and elongation of three terms;

- the ISO 9073-5.:2008 in 6.4 on the measurement requirements of the instrument into the standard 5.1, the constant traction tester to change for the constant speed elongation tester, an increase of the tester measuring accuracy requirements, Figure 1, the test device photo to a schematic diagram;

- 5.3 and 5.4 of ISO 9073-5.:2008 are incorporated into this standard 5.2 and the ball diameter is rounded from (25.400 ± 0.005) mm to (25.00 ± 0.02) mm;

The inner diameter of the annular gripper is rounded from (44.500 ± 0.025) mm to (45.0 ± 0.5) mm;

--- modified ISO 9073-5.:2008 6.1 sampling method;

--- the ISO 9073-5.:2008 6.5 test system calibration method to adjust the contents of the note;

--- increase the standard results of this calculation.

This part is proposed by the China Textile Industry Federation.

This part is headed by the National Textile Standardization Technical Committee (SAC/TC209).

This part of the drafting unit. China Textile Standard (Beijing) Inspection and Certification Center Co., Ltd., Shunde District of Foshan City, quality and technical supervision standards and Code.

This part of the drafters. Han Yuru, Zheng Yuying, Xu Lu, Li Jian.

Textiles - Test methods for nonwovens Part 5. determination of resistance to mechanical penetration (Ball top break method)

1 Scope

This part of GB/T 24218 specifies the test method for the determination of mechanical penetration of nonwovens using steel balls of specified diameter.

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This part applies to all types of nonwovens.

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 6529 Standard atmosphere for textiles for humidity control and testing (GB/T 6529-2008, ISO 139.:2005, MOD)

3 Terms and definitions

The following terms and definitions apply to this document.

Burst strong burstingstrength Under the specified conditions, acting on the plane of the fabric in the vertical direction, so that the fabric expansion to the rupture of the required force.

4 Principle

The specimen is held in a ring holder in a fixed base, and the ball plunger is vertically oriented to the specimen at a constant moving speed to deform the specimen Until the rupture, measured burst breaking strength.

5 Instruments

5.1

Equal speed elongation tester, equipped with ball break device (5.2), can be set to compression mode. At any point within the full range of the instrument, indicate or the error of the recorded burst strength should not exceed ± 1%.

5.2

steel ball break device includes polished steel ball plunger and ring specimen holder. The ball diameter of the polished steel ball plunger is (25.00 ± 0.02) mm. The inner diameter of the ring specimen holder is (45.0 ± 0.5) mm. During the test, the specimen holder was fixed and the ball plunger was constant Fixed speed movement. (See Figure 1) If the relevant party agrees, the diameter of the polished ball and the inner diameter of the annular specimen holder may be of other dimensions, indicated in the test report.

Preview: page 4 of 4 shown, 6 in the full document. Complete English PDF, instant download:
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