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

GB/T 24328.4-2020

Replacing GB/T 24328.4-2009

**Tissue paper and tissue products - Part 4: Determination of wet
tensile strength**

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Foreword

GB/T 24328 "Toilet Paper and Its Products" is divided into the following 12 parts.

---Part 1.Terminology guidelines;

---Part 2.Determination of thickness, laminate thickness, apparent laminate tightness and bulk;

---Part 3.Determination of tensile strength, elongation at maximum force and tensile energy absorption;

---Part 4.Determination of wet tensile strength;

---Part 5.Quantitative determination;

---Part 6.Determination of water absorption time and water absorption capacity basket immersion method;

---Part 7.Determination of the burst resistance of the spherical shape;

---Part 8.Determination of optical properties, determination of brightness and color D65/10° (outdoor daylight conditions);

---Part 9.Determination of the burst resistance of the wet spherical shape;

---Part 10.Determination of the tensile strength of the punching line and calculation of the punching efficiency;

---Part 11.Determination of optical properties, determination of brightness and color C/2° (indoor daylight conditions);

--- Part 12.Determination of optical properties. Determination of opacity. Diffuse reflectance method.

This part is Part 4 of GB/T 24328.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 24328.4-2009 "Toilet paper and its products Part 4.Determination of wet tensile strength", and

Compared with GB/T 24328.4-2009, the main technical changes are as follows.

- Modified normative references (see Chapter 2, Chapter 2 of the.2009 edition);
- Modify the accuracy requirements of the test parameters (see Chapter 5 and Chapter 8, Chapter 5 and Chapter 8 of the.2009 edition);
- Adjusted the requirements for soaking time during the test and revised the remarks (see Chapter 8, Chapter 8 of the.2009 edition);
- Modified the calculation method (see Chapter 9, Chapter 9 of the.2009 edition);
- Improved the test report information (see Chapter 10, Chapter 10 of the.2009 edition);
- Deleted the accuracy data of wet tensile strength retention rate and dry tensile strength (see Chapter 11 of the.2009 edition);
- According to the vertical tensile tester, the horizontal tensile tester respectively lists the precision data (see Appendix A).

This part uses the redrafting method to amend and adopt ISO 12625-5.2016 ``Toilet paper and its products Part 5.Wet tensile strength

Determination".

The technical differences between this part and ISO 12625-5.2016 and the reasons are as follows.

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to my country's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

- * Replace ISO 186 with GB/T 450 which is modified to adopt international standards;
- * Replace ISO 187 with GB/T 10739, which is equivalent to the international standard;
- * Replace ISO 1924-2 with GB/T 12914 which is modified to adopt international standards;
- * Removed ISO 7500-1;
- * Added reference to GB/T 24328.1.

--- Adjusted the scope to meet the technical requirements of our country.

---Adjusted the accuracy requirements of the force measurement system in 5.1.1 and 5.2.1 to determine the load to be consistent with the accuracy of our country's instruments.

---8.3.1.1 Add the note content of "Other water immersion time can also be selected

according to the water absorption of the sample, which needs to be stated in the report" to Improve the applicability of standards.

This section has made the following editorial changes.

---Modified the standard name.

Please note that certain contents of this document may involve patents. The issuing agency of this document is not responsible for identifying these patents.

This part was proposed by the China National Light Industry Council.

This part is under the jurisdiction of the National Paper Industry Standardization Technical Committee (SAC/TC141).

Drafting organizations of this section. China Pulp and Paper Research Institute Co., Ltd. (National Paper Quality Supervision and Inspection Center), China Light Industry (Jinjiang) Sanitary

Product Research Co., Ltd., Standardization Committee of China Paper Association.

1 Scope

This part of GB/T 24328 specifies the method for determining the wet tensile strength of toilet paper and its products.

This section applies to toilet paper and its products.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

The collection of GB/T 450 paper and paperboard samples and the determination of the longitudinal and transverse directions, front and back sides of the samples (GB/T 450-2008, ISO 186.

2002, MOD)

GB/T 10739 Standard atmospheric conditions for handling and testing of paper, paperboard and pulp samples (GB/T 10739-2002, eqvISO 187.

1990)

GB/T 12914 Determination of Tensile Strength of Paper and Paperboard Constant Speed Tensile Method (20mm/min) (GB/T 12914-2018,

ISO 1924-2:2008, MOD)

GB/T 24328.1 Toilet paper and its products Part 1. Terminology guidelines (GB/T 24328.1-2020, ISO 12625-1.

2019, MOD)

3 Terms and definitions

The following terms and definitions defined in GB/T 24328.1 apply to this document.

3.1

Wet tensile strength

First, soak the sample in distilled or deionized water, the maximum tensile force that the wet sample per unit width will bear before it breaks.

Note. The unit is Newtons per meter (N/m).

3.2

Wet-tensile-strength retention

Under standard atmospheric conditions, the ratio of the tensile strength of the same sample after soaking to the tensile strength before soaking.

Note. The value is expressed in %.

4 Principle

Soak the toilet paper and its product samples of the specified size in water for a certain period of time under specified conditions, and then place it on the tensile strength tester

It was stretched at a constant speed to break, and the tension was recorded.

The vertical or horizontal tensile strength tester can be used for testing. The vertical tensile tester is equipped with a Finch cup at the lower chuck for

Soak the sample; the chuck of the horizontal tensile tester is equipped with a soaking device to soak the sample.

Under standard atmospheric conditions, the tensile strength of the same sample before and after soaking was measured separately, and then the wet tensile strength retention rate was calculated.