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

GB/T 22364-2018

Replacing GB/T 22364-2008

Paper and board -- Determination of bending resistance

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Foreword

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

This standard replaces GB/T 22364-2008 "Determination of bending stiffness of paper and paperboard". Compared with GB/T 22364-2008, mainly

The changes are as follows.

- Revised scope (see Chapter 1, Chapter 1 of the.2008 edition);
- Modified terms and definitions (see Chapter 3, Chapter 3 of the.2008 edition);
- Split the static bending method into constant speed bending method and Taber stiffness meter method (see Chapter 4, Chapter 5, Chapter 4 of the.2008 edition);
- Revised the content of the test report (see Chapter 7, Chapter 6 of the.2008 edition);
- Increased precision related data (see Appendix B);
- Removed Appendix B of the.2008 edition.

This standard uses the redrafting method to modify the ISO 2493-1.2010 "Determination of bending stiffness of paper and board - Part 1

Bending method (Method 1. Constant-speed bending method), ISO 2493-2.2011, Determination of bending stiffness of paper and paperboard - Part 2. Taber stiffness

Instrument Method (Method 2. Taber Stiffness Method), ISO 5629..2017 "Determination of Bending Stiffness of Paper and Cardboard" (Method 3. Resonance)

law).

Compared with ISO 2493-1.2010, ISO 2493-2.2011, ISO 5629.2017, this standard has more adjustments in structure, Appendix A

A list of the numbering of this standard and ISO 2493-1.2010, ISO 2493-2.2011, ISO 5629.2017 is listed.

The main technical differences and reasons for this standard compared with ISO

2493-1.2010, ISO 2493-2.2011, ISO 5629.2017

as follows.

---About the normative reference documents, this standard is compared with ISO 2493-1.2010, ISO 2493-2.2011, ISO 5629.2017

Adjustments with technical differences to adapt to China's technical conditions, the adjustment situation is concentrated in Chapter 2 "normative introduction

In the file".

- * Replace ISO 186 with GB/T 450 modified to international standards;
- * Replace ISO 536 with GB/T 451.2 equivalent to the international standard;
- * Replace ISO 187 with GB/T 10739 equivalent to the international standard.

The main technical differences and their causes compared with ISO 5629.2017 are as follows.

--- Modify the "general sample width from 10mm to 25mm" to "sample width is 15mm, the width of the high-quantity sample can be

25mm" to help reduce the error of the test (see 6.3.3);

--- Integrate the contents of Method A and Method B in the test method (see 6.4), because the difference between the two methods is only quantitative

Different methods;

--- The combined result represents Method A and Method B, since the two methods are essentially the same (see 6.4.4).

This standard has made the following editorial changes.

--- Removed Appendix A of ISO 5629.2017;

--- Align precision-related content into Appendix B (see B.3) to align with the other two methods in this standard.

1 Scope

This standard specifies three methods for determining the bending stiffness of paper and paperboard. constant speed bending method, Taber stiffness meter method and resonance method.

This standard constant speed bending method is suitable for paper and paperboard with a bending stiffness of 20mN~10000mN. This standard Taber stiffness meter

The method is mainly applicable to high-quantity paper and paperboard. The Taber stiffness

meter in this standard does not include low-range Taber type using 10mm bending length.

Stiffness meter. This standard's resonance method is suitable for most paper and paperboard, and is not suitable for paper and paper that will be layered and have obvious curl when measured.

Board, and paper with a basis weight below 40g/m². This standard applies to corrugated board components but not to corrugated board.

Note. Measurement results obtained using different test methods cannot be converted to each other.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

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

GB/T 450 paper and paperboard samples taken and the longitudinal, lateral and frontal measurements of the samples (GB/T 450-2008, ISO 186.

2002, MOD)

GB/T 451.2 Determination of the quantitative determination of paper and paperboard (GB/T 451.2-2002, eqvISO 536.1995)

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

1990)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Bending force

The force required to bend a rectangular specimen that is clamped at one end under the test conditions specified in this standard.

Note. The bending force definition applies to the constant speed bending method.

3.2

Bending moment

Under the test conditions specified in this standard, the torque required to bend a

rectangular specimen clamped at one end.

Note. The bending moment definition applies to the Taber stiffness tester.

3.3

Bending stiffness bending resistance

The force or moment required for paper and paperboard to flex under the conditions of elastic deformation under the test conditions specified in this standard.

3.4

Bending angle

The angle at which the collet rotates from the initial position to the bending stiffness measurement position.

Note. The bending angle definition applies to the constant speed bending method and the Taber stiffness test method, and the bending angle is 15° or 7.5°.