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

GB/T 1539-2026

Replacing GB/T 1539-2007, GB/T 6545-1998

Board - Determination of bursting strength

纸板 耐破度的测定

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Principles

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 1539-2007 "Determination of Bursting Strength of Paperboard" and GB/T 6545-1998 "Determination of Bursting Strength of Corrugated Paperboard".

"Determination Methods". This document is based on GB/T 1539-2007 and integrates the content of GB/T 6545-1998. (The last sentence appears to be incomplete and possibly refers to a standard or standard.) in comparison, aside from structural adjustments and editorial changes, the main technical changes are as follows.

- a) Sample preparation has been modified (see 7.1, Chapter 7 of the 2007 edition);
- b) The experimental procedures have been modified (see 8.4, Chapter 8 of the 2007 edition);
- c) The precision has been changed (see 9.1, Chapter 10 of the 2007 edition).

This document is modified to adopt ISO 2759:2014 "Determination of bursting strength of paperboard".

The technical differences between this document and ISO 2759:2014, and the reasons therefor, are as follows.

- a) The scope has been changed (see Chapter 1) to comply with the requirements for drafting Chinese standard documents;
- b) The sample preparation method was modified (see 7.1) to suit Chinese technical conditions;
- c) ISO 186 (see 7.1) has been replaced with the normatively referenced GB/T 450 to adapt

to my country's technical conditions;

d) ISO 187 (see 7.2) has been replaced with the normatively referenced GB/T 10739 to adapt to my country's technical conditions;

e) ISO 536 (see 8.1) has been replaced with the normatively referenced GB/T 451.2 to adapt to my country's technical conditions.

The following editorial changes have been made to this document.

---The pending section in Chapter 5 has been removed;

---Added supplementary descriptions of precision in Chapter 9.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

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

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

1 Scope

This document describes a method for determining the bursting strength of cardboard by gradually increasing hydraulic pressure.

This document applies to all cardboard (including corrugated cardboard and hardboard) with a bursting strength of 350 kPa to 5500 kPa.

This document also applies to paper and paperboard with bursting strength as low as 250 kPa, used in the manufacture of high bursting strength materials (such as corrugated cardboard).

In some cases, the measurement results may not achieve the accuracy or precision described in this document. The test report should indicate that the measurement results are lower than those required by this method.

Find the minimum value within the measurement range.

In the absence of a specified testing method in the commercial agreement, for materials with a bursting strength between 350 kPa and 1400 kPa, all materials with low bursting strength...

For materials with a pressure of 600 kPa (excluding cardboard and corrugated cardboard), GB/T 454 is suitable for testing; for others, this document shall be used.

Measurement.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 450 Paper and paperboard specimen collection and determination of longitudinal and transverse directions, front and back sides of specimens (GB/T 450-2008, ISO 186.

2002, MOD)

GB/T 451.2 Paper and paperboard - Part 2: Determination of basis weight (GB/T 451.2-2023, ISO 536:2019, MOD) GB/T 10739 Standard atmospheric conditions for the treatment and testing of paper, paperboard and pulp specimens (GB/T 10739-2023, ISO 187.

2022, MOD)

3 Terms and Definitions

The following terms and definitions apply to this document.

Bursting strength

The pressure is applied by the hydraulic system, and is the maximum pressure when the elastic diaphragm punctures the circular area of the sample.

Note: The displayed value of the breaking pressure includes the pressure required for the film to stretch during the test.

Bursting Index

The bursting strength of the cardboard is divided by its basis weight.

4 Principles

The sample is placed above a circular adhesive film, its perimeter firmly clamped by a clamp to prevent bulging. Hydraulic fluid is pumped at a constant rate.

The pressure applied is used to make the adhesive film bulge until the sample ruptures; the maximum pressure value applied is the burst strength of the sample.