

ICS 85.060
CCS Y32



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

GB/T 44834-2024

Water-based coated paper and board for food packaging

食品包装用水性涂布纸和纸板

Issued on: October 26, 2024

Implemented on: May 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Foreword...	3
1 Scope...	4
2 Normative references...	4
3 Terms and definitions...	5
4 Classification...	5
5 Requirements...	5
6 Test methods...	7
7 Inspection rules...	9

1 Scope

GB/T 44834-2024 is the Chinese standard for water-based coated paper and board for food packaging. It exists because of what it replaces: the plastic and fluorochemical barriers that made a paper cup or a food carton hold liquid and resist grease, and that make the same carton impossible to recycle and a source of PFAS. A water-based coating gives the barrier without either problem, and the standard is what lets a converter specify one. It sets the classification, the requirements on the base paper and the coating, the physical requirements including grammage, thickness, tensile and burst strength and the surface properties, the barrier requirements for water, water vapour and grease, the requirements relevant to recyclability and repulpability, the hygiene and food contact safety requirements including the limits on the substances that may migrate, the test methods, the inspection rules and the marking, packaging, transport and storage. For a paper mill, a converter or a brand replacing plastic-lined packaging in China, this is the acceptance text.

This document defines terms and definitions, specifies requirements, inspection rules and marking, packaging, transportation and storage for water-based coated paper and board for food packaging, describes the corresponding test methods, and provides information on classification. This document applies to the production, inspection, and sale of water-based coated paper and board for food packaging.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 450, Paper and board - Sampling for testing and identification of machine and cross direction wire side and felt side

GB/T 451.1, Paper and board - Determination of size and deviation

GB/T 451.2, Paper and board - Part

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 water-based coated paper and board for food packaging Coated paper and board made of paper and paper board as substrates, coated with water- based emulsions or dispersions on one or both sides, and formed into a coating after drying, which is used for food packaging purposes.

4 Classification

4.1 Water-based coated paper and board for food packaging are classified into Type I, Type II and Type III according to their uses. Type I is generally used for packaging hamburgers, pastries, etc.; Type II is generally used for processing paper bags for holding dried fruits, disposable drinking water paper bags, etc.; Type III is generally used for processing paper cups, paper bowls, paper lunch boxes, etc.

4.2 Water-based coated paper and board for food packaging are classified into single-sided coated and double-sided coated according to the coating method.

4.3 Water-based coated paper and board for food packaging are classified into roll paper and sheet paper according to the packaging form.

5 Requirements

5.1 Physical and chemical properties The physical and chemical properties of water-based coated paper and board for food packaging shall meet the requirements of Table 1.

5.2.2 The cut edges of water-based coated paper and board for food packaging shall be neat, and the end faces shall be flat and clean. The roll of paper shall be tightly wound, and the paper core shall not be loose or deformed.

5.2.3 The color of water-based coated paper and board for food packaging in the same batch shall be uniform, and the color difference DeltaE of the same batch of paper shall not be greater than 2.0.

5.3 Dimensional deviations and skewness The roll width, roll diameter, and sheet size of water-based coated paper and board for food packaging shall be as specified in the contract. The width deviation of roll paper and the size deviation of sheet paper shall not exceed ± 3 mm, and the skewness of sheet paper shall not exceed 3 mm.

6 Test methods

6.1 Sample collection and processing The sampling shall be carried out in accordance with GB/T 450. When determining quantitative deviation, width thickness difference, water absorption, grease resistance, edge permeance mass, heat seal strength, bursting strength index, tensile index, wetting tension, dimensional deviation and skewness, the sample treatment and standard atmospheric conditions for the test shall be in accordance with the provisions of GB/T 10739.

6.2 Quantitative deviation Carry out the determination in accordance with GB/T 451.2.

6.3 Width thickness difference Carry out the determination in accordance with GB/T 451.3.

6.4 Water absorption Carry out the determination in accordance with GB/T 1540, where the water absorption time period shall be 10 minutes.

6.5 Grease resistance Type II products shall be tested according to GB/T 22805.2, and Type III products shall be tested according to Appendix B of GB/T 36392-2018.

6.6 Leakage performance Carry out the determination in accordance with Appendix A.

6.7 Edge permeance mass Carry out the determination in accordance with GB/T 31905.

6.8 Heat seal strength Carry out the determination in accordance with Appendix A of GB/T 25436-2023, where the parameters such as heat seal temperature, pressure, and time shall be agreed upon by the supplier and the buyer. Example. Verification of heat seal parameters. The temperature of upper sealing knife shall be $(150 \pm 5)^\circ\text{C}$; the temperature of lower sealing knife shall be $(50 \pm 3)^\circ\text{C}$; the pressure shall be

0.2 MPa; the time shall be 3 s; the heat sealing knife width shall be 5 mm.

6.9 Bursting strength index Carry out the determination in accordance with GB/T 454.

6.10 Tensile index Carry out the determination in accordance with GB/T 12914.

6.11 Anti-adhesive property Carry out the determination in accordance with Appendix B.

6.12 Wetting tension Carry out the determination in accordance with Appendix D of GB/T 36392-2018.

6.13 Moisture content upon delivery Carry out the determination in accordance with GB/T 462.