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

GB/T 18706-2025

Replacing GB/T 18706-2008

**Paper based laminated material for fresh-keeping packaging of
liquid food**

液体食品保鲜包装用纸基复合材料

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1 Scope

GB/T 18706-2025 is the Chinese national standard on paper based laminated material for fresh-keeping packaging of liquid food, in the field of packaging and distribution of goods. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 June 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2026. Classification: ICS 55.040, CCS A82. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the requirements for appearance quality, dimensional limit deviations, basis weight of inner plastic film, physical and mechanical properties, and solvent residue of paper-based laminated materials for fresh-keeping packaging of liquid food. It describes the corresponding test methods, specifies inspection rules, marking, packaging, transportation, and storage, and provides product classification. This document applies to the production and inspection of laminated materials for fresh- keeping packaging of liquid food, made from paper as the base material and laminated with plastic (with or without an aluminum foil layer).

2 Normative references

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

GB/T 191 Graphical symbols marking for handling and storage of packages

GB/T 1038.1-2022 Plastics - Film and sheeting - Determination of gas-transmission rate - Part

3 Terms and definitions

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

3.1 liquid food Food that is in a liquid state under normal conditions. NOTE. It includes foods with granules and pastes.

3.2 fresh-keeping packaging Packaging that holds sterilized liquid food in sterilized or unsterilized containers to maintain the freshness and hygiene of the liquid food.

3.3 sealing strip A strip of material that provides a seal on the inner surface of the longitudinal sealing section.

4 Classification

4.1 According to supply status, it is classified into roll form and preformed box form.

4.2 According to material structure, it is classified into those with aluminum foil layer and those without aluminum foil layer.

5.1 Appearance quality

5.1.1 The inner and outer surfaces shall be smooth, free from obvious stains, foreign matter, wrinkles, holes, cracks, and blisters.

5.1.2 Printed patterns shall be complete and clear, without obvious deformation or color difference, and without defects or misprints.

5.1.3 Indentation lines shall be straight and without cracks.

6 Test methods

6.1 Standard atmosphere for specimen conditioning and testing Unless otherwise specified, tests for physical and mechanical properties shall be performed in accordance with GB/T 2918, with conditioning at a temperature of $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ and a relative humidity of $50\% \pm 10\%$ for at least 4 h, and the tests shall be performed in this atmosphere.

6.2 Appearance quality Visual inspection under natural light.

6.3 Dimensional limit deviations

6.3.1 Dimensional limit deviations of materials Take a specimen and, using a measuring instrument with an accuracy of not less than

0.1 mm, measure the width of roll-form products, the width of preformed box products, and the length of preformed box products. Each specimen shall be tested at least 3 times at equal intervals along the test direction. Calculate the limit width deviation of roll-form products according to formula (1), the limit width deviation of preformed box products according to formula (2), and the limit length deviation of preformed box products according to formula (3). where. ΔW_J - the limit width deviation of the roll, in millimeters (mm); $W_{\min}$ or $W_{\max}$ - the measured minimum or maximum roll width, in millimeters (mm); W_J - the nominal roll width, in millimeters (mm). where. ΔW_D - the limit width deviation of the preformed box product, in millimeters (mm); $W_{\min}$ or $W_{\max}$ - the measured minimum or maximum width, in millimeters (mm); W_D - the nominal width of the preformed box product, in millimeters (mm). ΔL or ΔD - the limit length deviation of the preformed box product, in millimeters (mm); $L_{\min}$ or $L_{\max}$ - the measured minimum or maximum length, in millimeters (mm); L_D - the nominal length of the preformed box product, in millimeters (mm).

6.3.2 Dimensional limit deviations of printing positions The relative positions of the indentation line and the printed pattern, and the relative positions of each cut edge and the printed pattern, shall be measured using a 10x graduated magnifying glass or a measuring tool with an accuracy of not less than

0.05 mm [Translator's note. mm?], and the limit deviations are calculated.

6.3.3 Registration accuracy The registration accuracy of the printed pattern shall be measured using a 10x graduated magnifying glass or a measuring tool with an accuracy of not less than

0.1 mm, and the limit deviations are calculated.

6.4 Basis weight of inner plastic film Test according to Annex A.

6.5 Physical and mechanical properties

6.5.1 Tensile strength Test according to GB/T 1040.3. Take a long strip specimen and ensure the test area is flat. If there is an indentation at the test area and it cannot be avoided, use unmolded material for the test. The specimen width is 15 mm, the initial distance between the clamps is (100 ± 1) mm, and the tensile speed (no load) of the specimen is (100 ± 10) mm/min.

6.5.2 Seal strength Test according to QB/T 2358. Test the sealed area. The tensile speed (no load) of the specimen is (100 ± 10) mm/min. For roll form, apply the longitudinal sealing

strips that meet the usage requirements at the same time.

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