

ICS 83.140.10



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

GB/T 10004-2026

Plastic/Plastic laminated films and pouches for packaging

包装用塑/塑复合膜、袋

(English Translation)

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1 Scope

1 Scope

This standard specifies the classification, requirements, test methods, inspection rules, marks, packaging, transportation and storage of the laminated films and pouches for packaging which is produced by dry lamination and extrusion lamination process of different plastic materials.

This standard is applicable to the plastic, laminated films and pouches used for food and non-food packaging.

This standard is not applicable to the plastic films and pouches which are made of plastic material and paper base (or aluminum foil). It is also not applicable to the plastic films and pouches which are made of wet lamination and direct coextru-lamination process.

2 Normative References

The following standard contains provisions which, through the reference in the following text, constitute provisions of this standard. For dated reference, the subsequent amendments (excluding corrigendum) or revisions of these publications do not apply. However, the parties who enter into agreement based on this standard are encouraged to investigate the possibility of applying the latest editions of the standards indicated below. For undated references, the latest edition of the normative document referred to apply.

GB/T 191 Packaging - Pictorial Marking for Handling of Goods (GB/T 191-2008, ISO 780:1997, MOD) GB/T 1037-1988 Test Method for Water Vapor Transmission of Plastic Film and Sheet-cup Method GB/T 1038-2000 Plastics - Film and Sheeting - Determination of Gas Transmission -Differential-pressure Method GB/T 1040.3-2006 Plastics - Determination

of Tensile Properties - Part 3: Test Conditions for Films and Sheets (ISO 527-3:1995, IDT) GB/T 1410-2006 Methods of Test for Volume Resistivity and Surface Resistivity of Solid Electrical Insulating Materials (IEC 60093:1980, IDT) GB/T 2410-2008 Determination of the Luminous Transmittance and Haze of Transparent Plastics GB/T 2828.1-2003 Sampling Procedures for Inspection by Attribute - Part 1: Sampling Schemes Indexed by Acceptance Quality Limit (AQL) for Lot-by-lot Inspection (ISO 2859-1:1999, IDT) GB/T 2918-1998 Plastics - Standard Atmospheres for Conditioning and Testing (idt ISO 291:1997)

3.1 Functional classification

According to their usage purpose, the products are classified as food package and non-food package.

3.2 Service-temperature classification

According to their usage temperature, the products are classified as ordinary grade, boiling grade, semi-high temperature cooking grade and high temperature cooking grade.

3.2.1 Ordinary grade

The product usage temperature is less than 80°C (including 80°C).

4.1 General provisions

For the laminated films and pouches for food package and the package of non-food with hygiene requirements, the raw materials shall meet the food-package hygienic standard of the corresponding raw materials. The additive shall meet the hygienic standard of additive used for food container and packing material.

4.2 Polyethylene resin

The hygienic index of polyethylene resin shall meet the provisions in GB 9691.

5.1 Appearance

Film and pouch appearance shall meet the provisions in Table 1.

5.2.1 Intaglio printing

Intaglio printing quality shall meet the provisions in GB/T 7707.

5.3.1 Reel-film dimensional deviation

Width deviation is $\pm 2\text{mm}$. Thickness deviation is 10%. Negative length deviation is not allowed.

5.4.1 Peel force

Peel force index shall meet the provisions in Table 3.

5.4.4 Vapor permeability

Vapor permeability index shall meet the provisions in Table 6. Those indexes beyond the material structures listed in Table 6 shall be negotiated by the supplier and purchaser.

5.4.9 Heat resistance

For the product of which the usage temperature is greater than 80°C, after heat-resistance test, it shall be free from such abnormal phenomena of apparent deformation, interlayer stripping and part stripping at heat sealing position.

5.4.10 High temperature media resistance

For the product of which the usage temperature is greater than 80°C, after high temperature media resistance test, it shall be free from de-lamination, damage, distinct inner / outer pouch deformation. Peel force, tensile break stress, fracture nominal strain, and heat sealing strength shall be $\leq 30\%$.

5.4.11 Puncture strength

Puncture strength index shall be negotiated by the supplier and purchaser.

5.4.12 Luminous transmittance and haze

Luminous transmittance and haze index shall be negotiated by the supplier and purchaser.

6.1 Sample status adjustment and test standard environment

It shall be performed according to the standard environment and normal deviation scope specified in GB/T 2918-1998. The temperature is $(23 \pm 2)^{\circ}\text{C}$. The relative humidity is $(50 \pm 10)\%$. And the status adjustment is at least 4 hours. The test shall be carried out under this condition.

6.2 Sampling

Sampling package shall be perfect. The sampling quantity shall be enough to complete all test items. During film-reel sampling, the 3 layers of film reel surface shall be removed. Then cut and sample along the film-reel width direction.

6.5.1 Length and width deviations of films and pouches

The length and width deviations of films and pouches shall meet the provisions in GB/T 6673-2001.

6.6.1 Peel force

According to the provisions in GB/T 8808-1988.

6.6.11 Heat resistance

The film is heat-sealed and made into 200mmx120mm pouches (if the product dimension is less than the aforementioned, the actual specification is used). Fill with one half to two thirds water. Then in-pouch air is exhausted and the pouch is properly sealed.

6.6.12 High temperature resistance medium

The packaging pouches are filled with 4% HAC, 1% Na₂S, 5% NaCl water solution and refined vegetable oil respectively.

6.6.18 Specific chemical substances

Lead, mercury and cadmium shall meet the provisions in GB/Z 21274-2007.

Hexavalent chrome shall meet the provisions in GB/Z 21275-2007.

7.1 Group-batch

The products are inspected with a batch as the unit. The continuous-produced products with the same variety, same specification, same process and same raw material are deemed as a batch.

The longest continuous production duration shall not be greater than 7 d.

7.2.1 Ex-factory inspection

Ex-factory inspection items consists of appearance, printing quality, dimensional deviation, the items listed in Table 11, and the content in Article 8.1.

7.3 Sampling

Physical-mechanical properties and other properties are randomly sampled. Enough samples are sampled from each batch for the test.