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

GB/T 10004-2008

Replacing GB/T 10004-1998

**Plastic laminated films & pouches for packaging dry lamination
& extrusion lamination**

包装用塑料复合膜、袋 干法复合、挤出复合

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1 Scope

GB/T 10004-2008 is the Chinese national standard on plastic laminated films & pouches for packaging dry lamination & extrusion lamination, in the field of rubber and plastic industries. 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 31 December 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 August 2009. Classification: ICS 83.140.10, CCS G33. 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 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, 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 Classifications

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 Hygienic Indexes of Raw Materials and Additives

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 Requirements

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

5.2 Printing quality

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

5.3 Dimensional deviation

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 Physical-mechanical property

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 Test Methods

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 Dimensional deviation

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 Physical-mechanical property

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 Inspection Rules

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 Inspection classification

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.

7.4 Qualification judgment

7.4.1 Judgment of unqualified items If one of the followings. mark, appearance, printing quality and dimensional deviation is unqualified, this reel or piece is unqualified.

7.4.2 Qualified batch judgment The mark, appearance, printing quality and dimensional deviation are judged according to Table 12.