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

GB/T 10003-2008

Biaxially oriented polypropylene(BOPP) film for general use

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(English Translation)

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Foreword

This standard was modified in relation to ISO 17555:2003 Plastics - Film and sheeting - Biaxially oriented polypropylene (PP) films (English version).

This standard was redrafted based on ISO 17555:2003. Appendix A lists the comparison of the chapter and clause numbers of this standard and the chapter and clause numbers of the international standard ISO 17555:2003.

Taking into account Chinese national conditions, this standard has made some modifications when adopting ISO 17555:2003. Some technical differences have been incorporated into the text, and the relevant clauses are marked with a vertical single line in the margin. Appendix B provides a list of technical differences between this standard and ISO 17555:2003 and their reasons for reference.

Compared with ISO 17555:2003, the main differences in this standard are as follows:

- The product classification has been modified; the classification based on the treated surface and non-treated surface has been deleted, and the product is divided into ordinary type and heat-seal type according to whether it can be heat-sealed;
- The standard levels of major technical performances such as thickness deviation, tensile strength, elongation at break, haze, and treated surface wetting tension

are improved;

-- Two performance indices "heat seal strength" and "glossiness" are added.

For ease of use, this standard has also made the following editorial changes:

-- The foreword of the international standard has been deleted;

-- Informative Appendix A and Appendix B have been added for guidance.

This standard replaces GB/T 10003-1996 Biaxially oriented polypropylene plain film and GB/T 12026-2000 Biaxially oriented polypropylene film for heat-seal.

Compared with GB/T 10003-1996 Biaxially oriented polypropylene plain film and GB/T 12026-2000 Biaxially oriented polypropylene film for heat-seal, the main differences in this standard are as follows:

-- The technical indices such as thickness deviation and glossiness are improved;

-- The thickness test method has been unified, changing from the stacking method of GB/T 10003-1996 and the single-layer method of GB/T 12026-2000 to the stacking method;

Biaxially oriented polypropylene (BOPP) film for general use

1 Scope

This standard specifies the terms and definitions, classification, requirements, test methods, inspection rules, marking, packaging, transportation and storage of biaxially oriented polypropylene (BOPP) films for general use.

This standard applies to ordinary (plain film) and heat-seal films for general use, which are made from polypropylene resin as the main raw material and are produced by biaxial stretching using the flat film method.

This standard does not apply to other biaxially oriented polypropylene films with special functions, such as biaxially oriented polypropylene matt film, biaxially oriented polypropylene pearlized film, biaxially oriented polypropylene film for ripping strip, biaxially oriented polypropylene film for capacitors, and biaxially oriented polypropylene cigarette packaging film.

2 Normative references

The provisions in the following documents become the clauses of this standard through reference in this standard. For all the referenced documents with dates, all the subsequent amendments (excluding errata) or revisions are not applicable to this standard. However, the parties who reach an agreement based on this standard are encouraged to study whether the latest versions of these documents can be used. For all the referenced documents without dates, the latest versions are applicable to this standard.

GB/T191 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 1040.3-2006 Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets (ISO 527-3:1995, 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 attributes - 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)

GB/T 5009.60-2003 Method for analysis of hygienic standard of products of polyethylene, polystyrene and polypropylene for food packaging

GB/T 6672-2001 Plastics film and sheeting - Determination of thickness by mechanical scanning (idt ISO 4593:1993)

GB/T 6673-2001 Plastics film and sheeting - Determination of length and width (idt ISO 4592:1992)

GB/T 8807-1988 Test method for specular gloss of plastics

GB 9688 Hygienic standard for polypropylene products used as food containers and tableware

GB/T 14216-2008 Plastics - Film and sheeting - Determination of wetting tension (ISO 8296:2003, IDT)

3 Classification

Depending on whether there is a heat-sealing layer on the surface, it is divided into ordinary type (Type A) and heat-seal type (Type B).

4.1 Appearance

The appearance of the film shall comply with the requirements in Table 1, and the appearance of the film roll shall comply with the requirements in Table 2.

where:

deltad -- average thickness deviation, expressed in %;

deltadm -- the maximum thickness deviation, expressed in %;

deltadn -- the minimum thickness deviation, expressed in %;

L1 -- average thickness, in micrometers (μm);

L2 -- the maximum thickness value, in micrometers (μm);

L3 -- the minimum thickness value, in micrometers (μm);

S -- nominal thickness, in micrometers (μm).

5.5 Width and length

The test of the width and length shall be in accordance with the provisions of GB/T 6673-2001.

5.6 Tensile strength and nominal strain at break

According to the provisions of GB/T 1040.3-2006, the specimen is prepared by cutting method, and the specimen type is type 2. The specimen is a strip with a length of 150 mm and a width of (15 ± 0.1) mm. The distance between the fixtures is 100 mm, and the test speed is (250 ± 25) mm/min.