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

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**Biaxially oriented polyamide (nylon) film
(English Translation)**

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1 Scope

This Standard specifies the requirements, test methods, inspection rules, marks, packaging, transport and storage for biaxially oriented polyamide (nylon) film.

This Standard is application to a polyamide (nylon) film obtained by biaxially stretching a polyamide 6 resin as a main raw material in a flat film method (hereinafter referred to as the film).

2 Normative references

The following standards contain the provisions which, through reference in this

Standard, constitute the provisions of this Standard. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to this Standard. However, the parties who enter into agreement based on this

Standard are encouraged to investigate whether the latest versions of these documents are applicable. For undated reference documents, the latest versions apply to this Standard.

GB/T 191-2000, Packaging and storage marks (eqv ISO 780.1997)

GB/T 1038-2000, Plastics - Film and Sheeting - Determination of Gas

Transmission - Differential-pressure Method (neq ISO 2556.1974)

GB/T 2410-1980, Determination of the luminous transmittance and haze of transparent plastics (eqv ASTM D 1003.1997)

GB/T 2828.1-2003, Sampling procedures for inspection by attribute-

Part1.Sampling schemes indexed by acceptance quality limit(AQL) for lot- by-lot inspection (idt ISO 2859-1.1999)

GB/T 2918-1998, Plastics - Standard atmospheres for conditioning and testing (idt ISO 291.1997)

GB/T 6672-2001, Plastics film and sheeting - Determination of thickness by mechanical scanning (idt ISO 4593.1993)

GB/T 6673-2001, Determination of Length and Width of Plastics Film and Sheeting (idt ISO 4592.1992)

GB/T 10006-1988, Plastic film and sheet friction coefficient measuring ruler with an accuracy of 0.5 mm.

4.4 Thickness

Carry out according to GB/T 6672-2001. Take 12 layers of film. Remove the surface and bottom layers for overlay thickness measurement.

4.5 Width and length

Carry out according to GB/T 6673-2001.

4.6 Tensile strength and elongation at break

Carry out according to GB/T 13022-1991. The sample is 150 mm long and (15 ± 0.1) mm wide. Distance between clamps is 100 mm. Test speed is (250 ± 25) mm/min.

4.7 Heat shrinkage

Carry out according to GB/T 12027-2004. Test condition is $(160 \pm 2)^{\circ}\text{C}$, time is 5 min.

4.8 Haze

Carry out according to GB/T 2410-1980.

4.9 Coefficient of friction

Carry out according to GB/T 10006-1988.

4.10 Tear resistance

Carry out according to GB/T 11999-1989. Take 40 layers of samples to overlay and test. Divide the measured result by 40 is the tear resistance of the sample.

4.11 Wetting tension

Carry out according to GB/T 14216-1993.

4.12 Oxygen transmission

Carry out according to GB/T 1038-2000.

4.13 Hygienic properties

Carry out according to GB 16332.

5.1.1 Exit-factory inspection

The exit-factory inspection items are all items except the oxygen transmission and hygienic properties in Clause 3.

5.1.2 Type inspection

The type inspection includes all items in Clause 3. Usually, the type inspection should be conducted in one of the following cases.

- a) test stereotypes identification of new product;
- b) after the formal production, for example, when the structure, raw material, process have significant changes that may affect product performance;
- c) during formal production, conduct inspection once half year;
- d) when production is resumed after the production has been discontinued for more than six months;
- e) when the results of the exit-factory inspection and the previous type inspection are quite different;
- f) when state quality supervision agencies require to carry out the type inspection.

5.2.1 Batching

The sample unit for product sampling inspection is roll. For the products continually manufactured under same process conditions, with same formula, of same specifications, 100t shall be one batch. The yield less than 100t in a week shall be one batch.

5.2.2 Sampling

Physical mechanical performance and hygienic performance take a roll from any batch of products.

Appearance and size deviation use general inspection level as II specified in

GB/T 2828.1-2003, secondary sampling plan; AQL is 6.5. Perform sampling inspection according to Table 3.

6.1 Marks

The product shall have a certificate of conformity, indicating the product name, execution standard, size, mass, production date, inspection seal, manufacturer name and address. Outside the box there are signs of fear of rain, fear of the sun, fragile items, etc. in accordance with GB/T 191-2000.

6.2 Packaging

Each roll of film is protected at both ends with a foam pad and sealed with moisture-proof packaging material. Both ends are plugged with plastic plugs (if transported for a long distance, both ends are clamped into the carton). Tie with plastic tape.

Special packaging is agreed by the supplier and the purchaser.

6.3 Transport

Be careful when transporting to prevent mechanical impact and sun and rain.

6.4 Storage

The film shall be stored in clean, dry warehouse, stacked properly, away from heat and corrosive media, and not exposed to direct sunlight. The storage period is one year from the date of production.

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