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

GB/T 6672-2001

**Plastics film and sheeting - Determination of thickness by
mechanical scanning
(English Translation)**

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Foreword

This Standard is a revision of GB/T 6672-1986 Determination of thickness of plastic film and

sheeting by mechanical scanning.

This Standard is identical to the international standard ISO 4593.1993 Plastics - Film and sheeting - Determination of thickness by mechanical scanning. Apart from minor editorial modifications, it is identical in technical content and drafting method to ISO 4593.1993.

Compared with the previous edition, the main technical modifications are as follows.

Measurements of the specimen thickness are taken at equal intervals across the width of the

sample (the length of the specimen).

A clause on "Precision" has been added.

A requirement to report the test standard deviation, where applicable, has been added to the

"Report" clause.

As of the date of implementation, this Standard replaces GB/T 6672-1986.

This Standard was proposed by China National Light Industry Council.

This Standard shall be under the jurisdiction of National Technical Committee on Plastic Products of Standardization Administration of China.

The drafting organization of this Standard. Institute of Plastic Processing and Application of Light Industry.

1 Scope

This Standard specifies a test method for measuring the thickness of plastic film or sheet samples by mechanical scanning.

This Standard is not applicable to embossed films or sheets.

2.1 Thickness Measuring Instrument

It shall be capable of achieving the following precision.

- 1 μm for dimensions up to and including 100 μm (see NOTE 1);
- 2 μm for dimensions from 100 μm up to and including 250 μm ;
- 3 μm for dimensions exceeding 250 μm .

NOTE 1: When the aforementioned measuring instruments are inadequate for meeting higher precision requirements, this method shall not be used; instead, a more suitable measuring instrument or method shall be selected. ISO 4591.1992 Plastics - Film and sheeting - Determination of average thickness of a sample, and average thickness and yield of a roll, by gravimetric techniques (gravimetric thickness) specifies the determination of thickness by gravimetric techniques.

The measuring instrument shall have a lower measuring surface that is flat and an upper measuring surface that is either flat or convex; all measuring surfaces shall be polished.

2.1.1 When both the upper and lower measuring surfaces are flat, the diameter of each

measuring surface shall be between 2.5 mm and 10 mm, and the non-parallelism between the

two surfaces shall be less than 5 μm . The lower measuring surface shall be adjustable to meet

the above requirements. The load applied to the specimen by the measuring surfaces shall be

between 0.5 N and 1.0 N.

2.1.2 When the upper measuring surface is convex and the lower measuring surface is flat, the

radius of curvature of the upper measuring surface shall be between 15 mm and 50 mm, the

diameter of the lower measuring surface shall not be less than 5 mm, and the load applied to

the specimen by the measuring surfaces shall be between 0.1 N and 0.5 N.

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