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

GB/T 14216-2008

Replacing GB/T 14216-1993

Plastics -- Film and sheeting -- Determination of wetting tension

塑料 膜和片润湿张力的测定

(English Translation)

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Foreword

This standard is equivalent to international standards ISO 8296:2003 "Determination of plastic film and sheet wetting tension" in the technical content and standards Structure with quasi-identical, as only a few editorial changes.

This standard replaces GB/T 14216-1993 "plastic film and sheet wetting tension test method." this standard and GB/T 14216-1993 compared to the main changes are as follows.

- Increasing the range of factors instructions (see 1.3, 1.5);
- Test mixture solution eliminated Victoria Pure Blue (see Chapter 5);
- Table 1 wetting tension "66" to "65" (see Table 1);
- Remove the sample size requirements (see Chapter 6).

The standard proposed by China National Light Industry Council.

This standard by the National Plastics Standardization Technical Committee (TC48) centralized.

This standard was drafted. Light Industry Institute of Plastics Processing Applications, Foshan Plastics Group Co., Ltd.

Drafters of this standard. Li Tian Hua, Chen Qian, Shi Asia , Xu Lidan, Liang Wanxia.

This standard replaces the standards previously issued as follows.

- GB/T 14216-1993.

GB/T 14216-2008/ISO 8296:2003 Determination of plastic film and sheet wetting tension

1 Scope

1.1

standard applies to the determination of plastic film or sheet method using wetting tension test using a specific solvent.

1.2

ink-retaining plastic films, coatings, adhesives and other capabilities, depending on surface properties, or by one or more surface Processing techniques to enhance this capability. Such technology can also improve the wetting tension of the plastic film when contacting the mixed solution. Therefore, the film Run Wet tension may be related to the ability to inks, coatings, adhesives and other related reservations. Some particular wetting tension of the film surface with an oil by Ink, paint, adhesives etc. retention capacity was determined. Wetting tension itself is not entirely inks, coatings, adhesives and so determined.

1.3

Any contamination and traces of impurities in the liquid reagent can affect the film surface wetting tension. Therefore, the following factors on heavy . The film surface can not be measured in contact with the touch, test equipment to be very clean, purity reagents have better control. Especially glass Glass containers, if any detergent residue, will greatly reduce the surface tension, unless some special measures to ensure the removal of detergent residue, for example, cleaning with an oxidizing agent, such as an acid solution of chromium sulfate, ammonium persulfate in sulfuric acid solution, and washed with distilled water.

1.4

This standard does not apply to the sample surface of the material can occur with the test solvent chemical reactions.

1.5

should be marked. by the surface properties of the film and the sheet will change over time, it should be noted offline testing time.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2918-1998 standard plastic sample conditioning and environmental tests (idt ISO 291:1997) Principle 3 with a series of increasing the surface tension applied to the film

surface of the mixed solution, the mixed solution until wetted surface of the film just at this time Surface tension of the mixture of the nearest wildly as the sample surface wetting tension.

4 Instrument

4.1

coated hand tool. a film of 12 μ m wire bar coating, or can provide the same swab test results.

4.2

brown glass dropper bottle.

5 Test the mixed solution

Wetting tension measurement used in the test solutions are mixed, formamide, methanol and water mixture of reagent grade glycol ether (cellosolve), see

Table 1. Test the mixed solution should be stored in a brown glass dropper bottle (see 4.2), if stored properly, the mixed solution over time is small.

If you regularly use a mixed solution needs to be reconstituted in three months.

NOTE: The safety precautions --- processing solvents must be taken for laboratory safety precautions.

Table 1 mixed solution used for the determination of the film or sheet used for wetting tension

Wetting Tension/(mN/m) of ethylene glycol ethyl ether/mL formamide/mL methanol/mL Water/mL 22.6 - - 100.0 0 25.4 - - 90.0 10.0 GB/T 14216-2008/ISO 8296:2003