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

GB/T 5478-2008

Replacing GB/T 5478-1985

Plastics -- Test method for wear by rolling

塑料 滚动磨损试验方法

(English Translation)

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Foreword

This standard is equivalent to international standards ISO 9352:1995 "Plastics --- grinding wheel wear measurement method." this standard is equivalent translation with ISO 9352:1995.

For ease of use, this standard made the following editorial changes.

- To the "international standards" be replaced by "this standard";
- "." --- With a decimal point instead of a comma as the decimal point, "";
- Deleted the ISO preface, foreword increase the national standards;
- For ISO 6980-1:2006 international standard references, there is tantamount to the adoption of a standard for the use of standards in place, the rest no equivalent adopted as our standard, and in standards are directly referenced.

This standard replaces GB/T 5478-1985 "Test method for wear of plastics by rolling"; this standard and GB/T 5478-1985 compared to the main Changes are as follows.

- Added "principle" chapter;
- Modify the definition of grinding wheel;
- Increase the scope of use "does not apply to foam or paint";
- Increasing the grinding wheel selection table 1;
- The face runout by the "0.1mm or less" to "not more than 0.05mm" on a rotating disc;
- Rotating disc centerline distance between the centerline of the grinding wheel by "20.0mm $\pm$ 0.2mm" to "19.1mm $\pm$ 0.1mm";
- Will move from the outside of the centerline of the wheel disc axis by "39.5mm $\pm$ 0.2mm" to "38.9mm $\pm$ 0.2mm ";

- Remove the wheel mounting shaft diameter and wheel mounting arm length requirements;
- Added "Wheel diameter should be 100mm";
- Simplifying the specified load value "loading weights";
- Modify the rotating disc and grinding wheel mounting position diagram;
- Rubber outside diameter grinding wheel by the "49.5mm-51mm" to "51.6mm $\pm$ 0.02mm";
- By the thickness of the rubber wheels "13mm $\pm$ 0.2mm" to "12.7mm $\pm$ 0.1mm";
- Increased provisions wheel rubber layer should be "6mm thick hardness of vulcanized rubber layer 50IRHD to 55IRHD of";
- Delete specific provisions wheel quality indicators;
- The predetermined thickness of the sample by the "0.5mm to 5mm" to "0.5mm to 10mm";
- The number of samples by the provisions of "less than five samples of each group" with "not less than three samples per group";
- State regulation time by the "24h" to "48h";
- Remove the test procedure details about grinding step;
- The test step "with a sense of 0.1mg analytical balance that whichever quality" to "measurement of raw data";
- The distance test procedure and the sample between the suction hole "of about 3mm" changed "1.5mm $\pm$ 0.5mm";
- The sample steps "each successive test specimen 1000r" to test different conditions prescribed by the number of revolutions;
- Increase the results are shown in the results of the sample surface damage when performance changes and expression;
- Test report increased wear assessment methods;
- Added Appendix A.

Appendix A of this standard is a normative appendix.

The standard proposed by China Petroleum and Chemical Industry Association.

GB/T 5478-2008/ISO 9352:1995 this standard by the National Standardization Technical Committee of plastic products and plastic resins General Methods Chapter (SAC/TC15) centralized.

This standard was drafted. Sinopec hospital north of the National Chemical Building

Materials Testing Center (Materials Testing section).

Participated in the drafting of this standard. Country synthetic resin Quality Supervision and Inspection Center, the National Plastic Products Quality Inspection Center (Beijing), Guangzhou Blonde Technology Co., Ltd.

1 Scope

This standard specifies the method of plastic rolling wear test.

This standard applies to the determination of plastic plates, sheets rolling wear properties of the sample.

This standard does not apply to foam or paint.

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) GB/T 6031-1998 vulcanized rubber or thermoplastic rubber hardness measurement (idt ISO 48:1994) GB/T 17037.1-1997 Preparation of injection molded thermoplastic material specimens - Part 1. General principles and multipurpose specimens and long Article prepared sample (idt ISO 294-1:1996) ISO 293. 1986 Preparation of compression molded thermoplastic plastic --- sample ISO 295. 1974 Plastics --- thermosetting molding pressure method of sample preparation Plastic ISO 2818:1994 machined plastic --- sample preparation ISO 6508. 1981 Brinell hardness test ISO 6507-1. 1982 Vickers hardness test

3 Terms and Definitions

The following terms and definitions apply to this standard.

Wear plastic used to produce small wheel or wheels with sandpaper.

Since the scraping action of the grinding wheel leads to loss of material such as plastic material contact surfaces.

Principle 4

Quantitative load imposed on the two wheels and make contact with the sample, the sample after a predetermined number of times after the friction, resulting in wear and tear, then suitable the method should be evaluated (such as. mass wear, volume wear, changes

in optical properties, etc.).

5.1 Rolling wear tester

Sample is placed in an electric turntable. Two wheels can rotate freely in the axial direction and at a certain location at a certain load and take samples touch. Figure 1 illustrates the relative positions of the different components of the equipment shall meet the following requirements.

GB/T 5478-2008/ISO 9352:1995