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

GB/T 9345.4-2008

Replacing GB/T 12006.3-1989

Plastics -- Determination of ash -- Part 4: Polyamides

塑料 灰分的测定 第4部分：聚酰胺

(English Translation)

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Foreword

GB/T 9345 "Plastics - Determination of ash" is divided into five parts.

- Part 1. General Method;
- Part 2. polyethylene terephthalate, alkylene esters;
- Part 3. Unplasticized cellulose acetate;
- Part 4. Polyamide;
- Part 5. PVC.

This section GB/T Section 49345, which corresponds to ISO 3451-4:1998 "Plastics - Determination of ash --- --- Part 4.

Polyamide "(1998 in English). This part identical with ISO 3451-4:1998.

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

- a) to the "international standards" be replaced by the "Standard" or "GB/T 9345", the "this part of ISO 3451" to "GB/T 9345 this part of "or" this part ";
- b) Delete the ISO 3451-4:1998 Foreword;
- c) increase the foreword to the national standard of this Part;
- d) the "Normative references" international standards with the corresponding equivalents listed in a chapter using this file in place of national standards;
- e) use of a decimal symbol instead of the international standard decimal symbol ",". ";;
- f) to the International Standard "(m1/m1)" to "quality score", the results are shown in the "mass percentage" to "quality scores, in% "and its calculation formula was adjusted accordingly.

This Part replaces GB/T 12006.3-1989 "polyamide ash determination." this section compared with the GB/T 12006.3-1989 The main changes are as follows.

- Increased warnings;
- Increased by principle;
- Reagent added decabromodiphenyl (DBB), remove the hydrochloric acid;
- Muffle furnace temperature of 750 °C $\pm$ 50 °C to 850 °C $\pm$ 50 °C or at least can reach 850 °C;
- Filled and glass fiber reinforced materials by the calcination temperature of 750 °C $\pm$ 50 °C to 850 °C $\pm$ 50 °C;
- Increasing the precision of the data;
- Test report increased calcination methods used and the test sample before treatment.

This part is proposed by the China Petroleum and Chemical Industry Association.

This part of the National Plastics Standardization Technical Committee of plastic resins and products branch under the jurisdiction of the general method.

This section is responsible for drafting. National Quality Supervision and Inspection Center of synthetic resin.

Participated in the drafting of this section. Beijing Yanhua Petrochemical Company Limited resin Institute of Applied, National Plastic Products Quality Supervision and Inspection Test center (Beijing), Ltd. Nantong stars synthetic material, Zhonghao Chenguang Chemical Research Institute, Guangzhou Blonde Technology Co., Ltd., set Yihua Group company engineering plastics factory.

1 Scope

GB/T 9345 provisions of this part of the determination of filled and unfilled polyamide ash.

Following General Procedure GB/T 9345.1-2008 given in unfilled materials GB/T 9345.1-2008 party in Method A or Method C; filler and glass fiber reinforced materials GB/T 9345.1-2008 The method A.

For glass fiber filled material containing a flame retardant antimony trioxide and/or other volatile additives (such as a pigment zinc sulfide) should make with the volatile bromine-containing compounds to remove these additives together.

2 Normative references

The following documents contain provisions which, through reference to GB/T 9345 to the present, constitute provisions of this section. For dated reference documents Member, all

subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 9345.1-2008 Plastics - Determination of ash - Part 1. General method (ISO 3451-1:1997, IDT) Principle 3

3.1 Unfilled material

Direct calcination, namely the burning of organic matter, and then calcined at a high temperature treatment residue until constant weight (see GB/T 9345.1-2008 party in Method A).

If the material contains a metal halide and/or metal in the combustion of volatile organic substances (particularly in the case of under-containing halide) can be in the sulfation and then calcined (see GB/T 9345.1-2008 methods in C). That is the process by adding organic material together with concentrated sulfuric acid Heat until smoking, then burn organic matter, and finally calcination residue is treated until constant weight.

3.2 Filling and glass fiber reinforced materials

Direct calcination, namely the burning of organic matter, and then calcined at a high temperature treatment residue until constant weight (see GB/T 9345.1-2008 party in Method A) (see Note 1 in 3.3).

3.3 Glass fiber reinforced fire-retardant materials

In addition there is decabromodiphenyl under (DBB) calcining the case that the combustion of organic matter, and finally calcined residue was treated at a high temperature until constant weight (See GB/T 9345.1-2008 in Method A).

Note 1: Some additives, such as zinc sulfide, and decabromodiphenyl (DBB) in contact during the combustion of organic matter, could be like bromide as completely volatilized. Request for it shall be supplied or by pure chemical test to obtain information on the additives present in the material as well as potential for volatilization when they are in contact with the combustion DBB Information.

Note 2: The other flame retardants may be used in a high bromine content, such as 1,2-bis (tetrabromo phthalimide) ethane or brominated polystyrene. The application of chemicals Sex and the amount can be determined as follows. increasing the amount of flame retardant, according to a series of 6.4 Determination of ash, until a constant result. The Chemical products should be as a powder.

GB/T 9345.4-2008/ISO 3451-4:1998