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

GB/T 9345.2-2008

**Plastics -- Determination of ash -- Part 2: Poly (alkylene
terephthalate) materials**

塑料 灰分的测定 第2部分：聚对苯二甲酸烷撑酯

(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 29345, which corresponds to ISO 3451-2:1998 "Plastics - Determination of ash --- --- Part 2.

Polyethylene terephthalate, alkylene ester "(1998 in English). This part identical with ISO 3451-2:1998.

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

- 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 ";
- Remove the ISO 3451-2:1998 Foreword;
- Increasing the foreword of national standards in this section;
- The "Normative references" listed international standards with the corresponding national standards equivalent to a chapter of the document in place;
- Use of decimal symbol instead of the international standard decimal symbol ",. ", ";
- To the international standard "(m1/m1)" to the mass fraction, the results are shown in the "mass percentage" to "quality scores, in% "and its calculation formula was adjusted accordingly.

This section in the chemical industry standard HG/T 3031-1989 (1997) "polyethylene terephthalate hydrocarbon ester determination method of ash" (marked by the State Standard-setting GB/T 11995-1989 adjustment from) basis.

This section compared with HG/T 3031-1989 (1997) The main changes are as follows.

- Increased warnings;
- Increased by principle;
- Reagent added decabromodiphenyl (DBB), remove the hydrochloric acid;
- Muffle furnace temperature from $(750 \pm 50) ^\circ\text{C}$ to $(850 \pm 50) ^\circ\text{C}$, or at least can reach $850 ^\circ\text{C}$;
- Increasing the hood;
- Increased sample shape requirements;
- Increased the sample handling requirements;
- Filled and glass fiber reinforced materials by the calcination temperature $(750 \pm 50) ^\circ\text{C}$ changed $(850 \pm 50) ^\circ\text{C}$;
- 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 Standardization Technical Committee of plastic products and plastic resins General Methods Chapter (SAC/TC15/SC4) centralized.

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

This section GB/T 9345 provisions of the filled and unfilled polyethylene terephthalate (PET), polybutylene terephthalate (PBT) and the determination of both copolymers ash. Following General Procedure in GB/T 9345.1-2008 given in unfilled Materials GB/T 9345.1-2008 in Method A or Method C, filler and glass fiber reinforced materials GB/T 9345.1-

2008 Method A.

For antimony trioxide flame retardant glass filled material, and/or other volatile additives (such as pigments zinc sulfide) contained, it should be Combined with volatile bromine-containing compounds to remove these additives together.

2 Normative references

The following documents contain provisions by GB/T 9345 reference in this part of the provisions of this section. For dated references, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encourage the agreement on this section Whether the parties can study 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 metal halides and conditions/or during combustion of organic matter, containing volatile metals (especially in the halide-containing Under), and then calcined in sulfation (see GB/T 9345.1-2008 methods in C). That is the method by organic matter and a concentrated sulfuric acid from heat until smoke, combustion of organic compounds and then, the residue was treated finally calcined at an elevated temperature 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 (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 9345.2-2008/ISO 3451-2:1998