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

GB/T 19466.6-2009

**Plastics -- Differential scanning calorimetry (DSC) -- Part 6:
Determination of oxidation induction time (isothermal OIT) and
oxidation induction temperature (dynamic OIT)**

塑料 差示扫描量热法 (DSC) 第6部分: 氧化诱导时间(等温OIT)和氧化诱导温度
(动态OIT) 的测定

(English Translation)

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Foreword

GB/T 19466 "plastic differential scanning calorimetry (DSC)" is divided into seven parts.

- Part 1. General;
- Part 2. Determination of glass transition temperature;
- Part 3. Determination of melting and crystallization temperature and enthalpy;
- Part 4. Determination of specific heat capacity;
- Part 5. Characteristics of the reaction temperature, reaction time, and determination of thermal conversion reaction;
- Part 6. oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) measurement;
- Part 7. Determination of crystallization kinetics.

This section GB/T Part of 619,466.

The partial modification using ISO 11357-6:2008 "Plastics differential scanning calorimetry (DSC) - Part 6. oxidation induction time (et Temperature OIT) and oxidation induction temperature (dynamic OIT) determination "(in English).

This section according to ISO 11357-6:2008 redrafted.

This portion of the ISO 11357-6:2008 main technical differences are as follows.

- Chapter 11 for our precision data, ISO 11357-6:2008 precision as an appendix;
- On the ISO 11357-6:2008 standard part reference made the following treatment.
 - a) have not yet been converted to our standard "plastic polybutylene (PB) molding and extrusion materials - Part 2. Sample preparation and Performance test "standard to refer directly to the ISO standard;

b) on the other it has been converted to our standard, the reference of national standards.

Appendix A of this section is an informative annex.

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 unit. China National Petroleum Corp. Chemical Research Institute of Daqing Petroleum Chemical Research Center, China Petroleum Yanshan Chemical Co., Ltd. Beijing Branch of the Institute of Applied resin, China Petroleum & Chemical Corporation Qilu Company Institute.

This section participated in the drafting unit. China PetroChina Daqing Petrochemical Company, Changchun Institute of Applied Chemistry the study, Chenguang Chemical Research Institute Co., Ltd.

Introduction

Oxidation induction time or temperature of the oxidation induction section GB/T 19466 of the measurement provided only by the test material to evaluate certain Structural plastic thermal stability of blends a way, but it is not intended to provide information about the concentration of antioxidants. Different antioxidants, oxidation induced Guide oxidation induction time or temperature may vary. Because antioxidants and other substances may be present in the formulation interacting, even antioxidant species Class materials and the same concentration of peroxide-induced oxidation induction time or temperature will vary.

Plastic differential scanning calorimetry (DSC) Part 6. oxidation induction time (isothermal OIT) and oxygen Determination of induction temperature (dynamic OIT) of Warning --- Users of this standard should be familiar with laboratory practice adopted. This standard does not address all of the safety issues associated with use the solution, if any, associated with its use is only. Responsibility of the user of this standard to establish prior to use appropriate measures to protect the personal safety Shi and determine the applicability of these rules and regulations.

1 Scope

GB/T 19466 provisions of this part of the determination of the oxidation induction time of the polymeric material with differential scanning calorimetry (DSC) (isothermal OIT) and Oxidation induction temperature (dynamic OIT) testing methods.

This section applies to a sufficiently stable compounded polyolefin material (raw materials or final product). This section also applies to other plastics.

2 Normative references

The following documents contain provisions which, through reference GB/T 19466 in this section 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 standard.

GB/T 1845.2-2006 plastic polyethylene (PE) molding and extrusion materials - Part 2. Preparation of test specimens and determination (ISO 1872-2:1997, MOD) GB/T 2035-2008 Plastics terms and their definitions (ISO 472:1999, IDT) GB/T 2546.2-2003 Plastics - Polypropylene (PP) molding and extrusion materials - Part 2. Preparation of test specimens and determination (ISO 1873-2:1997, MOD) GB/T 9352-2008 plastic thermoplastic material sample compression molded (ISO 293:2004, IDT) GB/T 17037.3-2003 Preparation of plastic injection molded test specimens of thermoplastic materials - Part 3. Small square test piece (ISO 294-3:2002, IDT) GB/T 19466.1-2004 plastic differential scanning calorimetry (DSC) - Part 1. General (ISO 11357-1:1997, IDT) ISO 8986-2:1995 plastic polybutylene (PB) molding and extrusion materials - Part 2. Sample Preparation and Performance Testing

3 Terms and Definitions

GB/T 2035-2008 and GB/T 19466.1 and established the following terms and definitions apply to this section.

Isothermal OIT, isothermalOIT Stabilized material resistant to oxidative decomposition of a relative measure. Under atmospheric pressure, oxygen or air atmosphere at a predetermined temperature by calorimetry Exothermic oxidation time of the material appears.

Note: in minutes (min) Fig.

Dynamic OIT, dynamicOIT