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

GB/T 13464-2008

Replacing GB/T 13464-1992

Thermal analysis test methods for thermal stability of materials

物质热稳定性的热分析试验方法

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Foreword

The technical content of the standard test reference standard adopted ASTM E537-2002 "measurement of thermal stability of chemicals by differential scanning calorimetry of Test method" (in English). Compared with ASTM E537-2002 (in English), this increases the standard differential thermal analyzer thermal stability test chemicals Of methods. By differential thermal analysis and differential scanning calorimetry measurements collaborative Material Thermal stability parameters contribute to a more accurate judgment Reaction Mechanism of Thermal Stability of substance. This standard replaces GB/T 13464-1992 "Standard Test Method for Thermal Analysis Thermal Stability of substance." This standard and GB/T 13464- The main difference compared to 1992 is as follows:

- Modify the scope of the standard (see Chapter 1);
- Increasing the normative references (see Chapter 2);
- Modify the terms and definitions of the contents of a chapter (Chapter 2 edition 1992, Chapter 3 of this edition);
- Modify the instrument parameters required rate of temperature-programmed by "2 °C/min ~ 30 °C/min" to "2 °C/min ~ 20 °C/min" (1992 version 4.1, this version 5.1);
- Added "load balance" the instrument range and accuracy requirements (see 5.7);
- Increase the experimental precision and bias requirements (see Chapter 9). Appendix A of this standard is a normative appendix, Appendix B is an informative annex. The standard proposed by the People's Republic of China Ministry of Public Security. This standard by the National Standardization Technical Committee on Fire First Technical Committee (SAC/TC113/SC1) centralized. This standard was drafted. Tianjin Fire Research Institute of Ministry of Public Security. The main drafters of this standard. Chen Yingchun, Deng Zhenyu, Zhuo Ping, Cheng Gong first. This standard replaces the standards previously issued as follows:
- GB/T 13464-1992. Thermal analysis test methods for material thermal stability

1 Scope

GB/T 13464-2008 is the Chinese national standard on thermal analysis test methods for thermal stability of materials, in the field of environment and health protection, safety. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 26 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 March 2009. Classification: ICS 13.220.01, CCS C80. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies a differential thermal analyzer and/scanning calorimeter measuring thermal stability test substance or differential method used instruments and materials Materials, samples, test procedures, test results, accuracy, security and other issues and limitations. This standard applies to a certain pressure (including pressure) in an inert or reactive atmosphere, at -50 °C ~ 1500 °C temperature range There are evaluation of solid, liquid and paste material thermal stability enthalpy.

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 6425-1986 term thermal analysis

3 Terms and Definitions

GB/T 6425-1986 and established the following terms and definitions apply to this standard.

3.1 Under certain conditions, the material does not occur enthalpy change (only applicable to this standard, see 3.2).

3.2 Any change in endothermic or exothermic material occurs.

3.3 By differential thermal analysis peak area of the peak of the response (DTA) curves or differential scanning calorimetry (DSC) curve (integral function of time) means Zheng substance reaction heat per unit mass, in units of mJ per milligram (mJ/mg) or coke per gram (J/g).

3.4 Ti Record curve begins to deviate from the baseline corresponding temperature.

3.5 T_p An endothermic peak or an exothermic peak corresponding to the peak top temperature.

3.6 T_e The slope on the leading edge of the peak maximum temperature corresponding to the intersection point as the tangent and extension baseline.

3.7 T_i The first occurrence of the exothermic peak starting temperature.

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