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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3078.1-2012

Guide for assessing thermal stabilit of chemicals. Part 1: Methods of accelerating rate calorimetry

化学品热稳定性的评价指南 第1部分：加速量热仪法

(English Translation)

Issued on: May 7, 2012 **Implemented on: November 16, 2012**

Issued by: General Administration of Customs

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Foreword

SN/T 3078 "Evaluation Guide chemicals thermal stability" is divided into two parts.

--- Part 1. Accelerating Rate Calorimeter method;

--- Part 2. Thermal gravimetric analysis.

This section SN/T Section 13078 of.

This section reference ASTME1981-98 (2004) "chemical thermal stability evaluation guidelines Accelerating Rate Calorimetry Method." this section drafted in accordance with GB/T 1.1-2009 given rules.

This section proposed and managed by the National Certification and Accreditation Administration Committee.

1 Scope

SN/T 3078 provisions of this part of the Accelerating Rate Calorimeter recommended operations procedure. The calorimeter system can be obtained in the adiabatic approximation Data temperature and pressure changes over time when the physical and chemical changes take place under the conditions.

This section applies to the use of accelerated evaluation Calorimeter thermal stability of chemicals. After an appropriate scale, this part of the test data can be Prudence and used to predict the chemical or chemical mixture processing, storage and transport-related hazards. Under appropriate conditions, this standard applies to study the catalyst, inhibitor, initiator, reaction atmosphere, physical structure or stirring impact.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

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Thermal stability GB/T 22232-2008 Determination of chemical substances differential scanning calorimetry Instability Test Method ASTME476 closed condensate system heat Standard Test Method for thermostatic stability ASTME487 chemical materials the sensitivity of the test method for solid hazardous materials drop ASTME680 heavy impact Arrhenius dynamic ASTME698 thermally unstable materials Standard Test Method for constant ASTME1231 for calculation of thermally unstable materials potentially dangerous coefficient of performance

3 Terms and Definitions

The following terms and definitions apply to this document.

Adiabatic calorimeter it has the ability to continuously measure the temperature difference between the sample and the environment, to ensure that the minimum amount of heat exchange situation occurs between the sample and the environment Conducted under conditions of heat measuring instruments.

Autocatalytic reaction the product of the reaction medium or chemical reaction catalysis.

Drift drift

Since the temperature of the system after the system (sample container and environmental) limitations calibration or calibration system changes caused by increasing or cut back.

End temperature finaltemperature (Tfinal) at the end of the exothermic reaction observed temperature of the system, usually refers to self-heat, the reaction rate drops below the sensitivity of the slope set by the operator

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