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Test method for self-heating substances screening

自热物质筛选试验方法

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Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

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This document is proposed and coordinated by the National Standardization Technical Committee for the Management of Hazardous Chemicals (SAC/TC251):

This document was drafted by: Shanghai Institute of Chemical Industry Testing Co., Ltd., Shanghai Research Institute of Chemical Industry Co., Ltd., BASF New Materials Co., Ltd., China China Petroleum and Chemical Industry Federation, China Chemical Economic and Technological Development Center:

The main drafters of this document: Xiao Qiuping, Zhou Jian, Lin Zhanxiang, Fan Bin, Lu Dongdong, Liu Wanqing, Yu Chenzheng, Pu Zhengyu, Ma Pan, He Yuan, Cai Chenren, Huang Jingyi, Zhou Jingqian, Wu Wenqian, Cao Mengran, Chen Yiwen, Hao Yuan:

Self-heating substance screening test method Warning---Personnel using this document should have practical experience in regular laboratory work: This document does not address all possible security issues question: Users are responsible for taking appropriate safety and health measures and ensuring compliance with the conditions stipulated in relevant national regulations:

1 Scope

This document specifies the safety protection measures, reagents and samples, test equipment, test procedures and test reports for self-heating substance screening tests:

This document is suitable for preliminary screening of self-heating properties of powdery substances:

This document does not apply to explosive substances or mixtures:

2 Normative reference documents

GB/T 21612

3 Terms and definitions

The following terms and definitions apply to this document: 3:1 self-heating substance
self-heating substance Except for pyrophoric liquids or pyrophoric solids, solid or liquid substances or mixtures that can self-heat by reacting with air without requiring an energy supply; this Substances or mixtures differ from pyrophoric liquids or pyrophoric solids in that they only ignite in large quantities (kilograms) and over long periods of time (hours or days):

Spontaneous combustion may occur:

Note: Self-heating of a substance or mixture is a process in which the substance or mixture gradually reacts with oxygen (in the air) to produce heat: If heat is generated If the rate exceeds the rate of heat loss, the temperature of the substance or mixture will rise: Over time, spontaneous ignition and combustion may result:

[Source: GB 30000:12-2013,3:1]

4 Safety protection measures

4:1 When pre-processing the sample to be tested, test personnel should understand the poisonous and explosive properties of the sample: Sample manufacturers and providers should provide Information about product safety and protection:

4:2 Test personnel should wear necessary labor protection equipment, such as goggles, dust masks, and temperature-resistant gloves:

4:3 All electrical equipment should be well grounded and have leakage protection devices to prevent electric shock:

4:4 When cleaning the sample basket, ensure that the sample temperature drops to normal temperature to prevent high temperature burns:

4:5 The test should be conducted in a well-ventilated environment such as a fume hood to avoid harm to the human body and the environment caused by toxic substances:

5 Reagents and samples

5:1 Reagents 5:1:1 Reference material: Generally graphite or other inert materials are used, with particle size less than 250 μm :