

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

SN/T 4896-2017

Test method of vapour pressure for dangerous chemicals

危险化学品蒸气压测定方法

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Hunan Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Tianjin Entry and Exit Inspection of the People's Republic of China Epidemic situation.

Introduction

This method is a revised method of the OECD 104 test method, which was first introduced into the OECD test method in 1981 and was introduced in early 1995.

Minor revision. In this method, a new test method. exudation method - isothermal thermogravimetric analysis is introduced, exudation method - isothermal thermogravimetric analysis method from the 1992 "Vapor Pressure Measurement" and its BASF developed in 2001 for substances with very low vapor pressure (less than 10-10Pa) Vapor pressure measurement method [1]. This method simultaneously re-evaluates the range of applicability for several other vapor pressure measurement methods.

For pure materials, vapor pressure is only a function of temperature under thermodynamic equilibrium conditions [2, 3]. There is currently no single test method that can be adapted Vapor pressure measurement for all pressure ranges from 10-10 Pa to 105 Pa.

The eight measurement methods of this standard can meet the measurement of vapor pressure in various ranges.

Method for measuring vapor pressure of hazardous chemicals

1 Scope

This standard specifies the terms and definitions of vapor pressure determination of solid and liquid substances, reference materials, test principles, test methods, data and tests. report.

This standard applies to the determination of vapor pressure of solid or liquid substances that do not decompose within the limits of the test conditions. For technical reasons for substances that cannot be measured, the vapor pressure can be calculated by the method in Appendix A of this standard.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this file. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 22229 Determination of vapour pressure of solids and liquids of industrial chemicals in the range of 10⁻³ Pa to 1 Pa Balance method

3 Terms and definitions

The following terms and definitions apply to this document.

Vapor pressure vapourpressure the saturation pressure of a solid or liquid.

Note: In the SI measurement system, the pressure unit is Pa (Pa), and other units are converted with this unit as follows.

1 Torr (Torr) = 1 mm Hg (1 mmHg) = 1.333 x 10² Pa 1 atmosphere (atm) = 1.013 x 10⁵Pa 1 bar (bar) = 10⁵Pa in the SI measurement system, the temperature unit is Kelvin (K), and the absolute temperature and Celsius temperature are converted as follows.

$$T=t+273.15$$

Where T is the absolute temperature and t is the Celsius temperature.

4 Reference

The vapor pressure measurement does not require a reference material, and the reference material is used only when comparing the vapor pressure results obtained by different methods.

5.1 Overview

According to the thermodynamic equilibrium principle, the vapor pressure of a pure substance is only a function of temperature, and the vapor pressure of the substance under different temperature conditions is measured.

The logarithmic value and absolute temperature of the vapor pressure of pure material in the fixed temperature range according to the Clapeyron-Clausius equation the reciprocal is linear, as shown in equation (1).