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

**GB/T 21792-2008**

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**Determination of flash/no flash -- Closed cup equilibrium  
method**

闪燃和非闪燃测定 闭杯平衡法

**(English Translation)**

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### Foreword

This standard is identical with ISO 1516:2002 "and non-flashover flashover measured Closed cup equilibrium method" (in English).

Appendix A of this standard is an informative annex.

This standard is managed by the National Standardization Technical Committee chemicals dangerous (SAC/TC251) and focal points.

### Introduction

This standard describes two closed cup equilibrium method in one, this method is used for testing and non-flashover flashover. Test objects are. color Paints, varnishes, petroleum and related products. When you need to select a method in both closed cup equilibrium method for testing requires a combination of the other Balanced law, see GB/T 21790 "and non-flashover flashover - Rapid equilibrium closed cup method" (Ref. [2]).

The criteria used for the determination of non-flashover flashover and instruments with GB/T 21775 "Determination of flash point - Closed cup equilibrium method" as described Above consensus.

The test method and test conditions did not go in the flash point of the product was measured, was only measured at a selected temperature equilibrium, full product requirements Foot store, the relevant state laws or regulations, transport and use of flammable product requirements. Therefore, in order to satisfy this object, measured quasi products Flash point is not really necessary, but it is necessary to determine whether the product will flash fire at a given temperature. Under the test program, Tested at a temperature equilibrium state is through a mixture of air and vapor above the liquid product within the container and the test to ensure that reference the difference between the various standard tests designed to minimize between instruments.

GB/T 21792-2008/ISO 1516:2002 and non-flashover flashover measured Closed cup

equilibrium method

## 1 Scope

This standard specifies a method, when maintained at a selected temperature equilibrium and is under test conditions, for determination of color Whether paint, varnish, paint binders, solvents, petroleum and related products can be volatile enough flammable vapor, through the application of an external ignition source to when the standard mode operation, can cause ignition.

This standard does not apply to water-based paint, but these products can be used GB/T 21790 "and non-flashover flashover - Rapid equilibrium closed cup Law "to test (Ref. [2]).

This standard applies to a temperature range of -30 °C ~ 110 °C, depending on the instrument used, temperature ranges listed in Table 1.

When using this method to test a mixture containing a halogenated hydrocarbon solvent, may give abnormal results, its results should be carefully explained.

## 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 3186-2006 Paints, varnishes and raw materials for paints and varnishes - Sampling (ISO 15528:2000, IDT) GB/T 20777-2006 Paints and varnishes examination and preparation of samples (ISO 1513:1992, IDT) GB/T 21775 Determination of flash point - Closed cup equilibrium method (ISO 1523:2002, IDT) GB/T 21929 Tag closed cup flash point assay (ASTMD56:2005, IDT) ISO 2719:2002 Flash Point by Pensky - Martins (Pensky-Martens) closed cup method ISO 3170. 1988 Liquid petroleum manual sampling method ISO 3171. 1988 Petroleum liquids pipeline automatic sampling ISO 13736:1997 Petroleum products and other liquids - Determination of flash point Abel closed cup method DIN51755. 1974 Mineral oils and other combustible liquids testing, closed tester used in Abel - Pensky (Abel-Pen-sky) Determination of flashpoint

## 3 Terms and Definitions

The following terms and definitions apply to this standard.

Under test conditions, the ignition source test sample vapor and combustion occurs when the surface of the liquid spread, the lowest obtained sample Flash point is the temperature (under 101.3kPa corrected to atmospheric pressure).

#### Principle 4

Mounted in a test sample designed to match with the instrument closed cup, and the cup was placed in a thermostatically controlled bath. The sample was maintained in setting the equilibrium temperature for at least 10min, by a small flame directly into the test cup ignition test. Observation of the test sample are the top vapor is ignited, record the results.

GB/T 21792-2008/ISO 1516:2002