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

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**Transport of dangerous goods -- Test methods and criteria
relating to article, packaged article or packaged substance for
transport**

(English Translation)

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Foreword

Chapter 4 of this standard is mandatory, the rest are recommended.

This standard and the United Nations. the degree of consistency "Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria" (fourth revised edition) of non Equivalent, which is related to the technical content of the above-mentioned full agreement on a standard text format according to GB/T 1.1-2000 made editorial changes.

This standard and the United Nations "on the Recommendations on the Transport of Dangerous Goods. Manual of Tests and Criteria," the technical content correspond to the following.

4 corresponding to Test Series 4 (a) (i) a first method --- test;

--- test series corresponding to the second method 4 (b) (i) Test 4;

--- a third test series corresponding to Method 4 (b) (i) Test 4.

This standard is proposed and managed by the Dangerous Chemicals Management Standardization Technical Committee (SAC/TC251).

This standard is drafted. Jiangxi Exit Inspection and Quarantine.

It participated in the drafting of this standard. the Chemical Institute of Standardization, China Petroleum and Chemical Industry Association.

1 Scope

This standard specifies whether the item, article or packaging material suitable for packaging and testing methods to determine the basis of the results of transport.

This first method is suitable for standard thermal stability test article and packaging articles.

This second method is suitable for standard steel homogeneous liquid drop test.

This third method is suitable for standard items, packaging materials and packaging materials in addition to the homogeneous liquid 12m drop test.

2 Normative references

Terms of the following documents become provisions of this standard by reference in this standard. For dated reference documents, all later Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to agreements based on this standard Whether the latest versions of these documents. For undated references, the latest version applies to this standard.

GB 5085 Identification standard for hazardous wastes GB 6944 Classification and code of dangerous goods GB/T 15233 cargo packaging unit size (GB/T 15233-2008, ISO 3676. 1983, MOD) UN "Recommendations on the Transport of Dangerous Goods. Model Regulations" (Fifteenth revised edition) ASTM D4359:1990 Test Method for Determination of a substance is a liquid or solid "Dangerous Goods European Agreement concerning international road transport."

3 Terms and Definitions

GB 5085, GB 6944, GB/T 15233 and the United Nations "Recommendations on the Transport of Dangerous Goods. Model Regulations" (XV revision Edition), and established the following terms and definitions apply to this standard.

Dangerous Goods an explosive, flammable, toxic, infectious, corrosive, radioactive and other hazardous characteristics, transportation, storage, production, operation, use and disposal, capacity it could easily lead to personal injury, property damage or environmental pollution and need special protection substances and articles.

Package

Packaging operations of end products, including ready to transport the container and its contents for.

Liquid

Means at 50 °C vapor pressure of not greater than 300kPa, and the lower pressure of 101.3kPa 20 is not completely gaseous deg.] C, a melting point at a pressure 101.3kPa or initial melting point or lower than 20 °C dangerous goods. For sticky substance than the melting point should not be determined using ASTM D4359:1990 Test or the "European Agreement on International Road Transport of Dangerous Goods" (United Nations publication. ECE/T RANS/160) 2.3.4 specified in Annex A flow Assay test to determine whether the liquid.

Explosion

In a very short time, releasing large amounts of energy, high temperature, and large amount of gas evolution, resulting in a chemical reaction or a high-pressure state becomes around the phenomenon.

Mass explosion massdetonationorexpllosionoftotalcontents Refers to the moment of explosion can affect almost all of the load.

Explosives explosive Solid or liquid material, chemical reaction can occur violently under external action (such as heat, pressure, impact, etc.), a large amount of gas instantaneously and body heat, so that the surrounding pressure were sharply rising exploded, causing damage to the surrounding objects, but also not a mass explosion hazard, with burning Burn, ejections and less dangerous explosives.

Deflagration when set off, explosive pyrotechnics at near reaction rate violent burning phenomenon.

Detonation Shock wave is characterized by an explosion at supersonic propagation. Shock wave propagation velocity typically in excess of 1000m/s, and the detonation velocity of the external conditions the less affected.

Packaging unit packagedunit by a variety of means of one or a group of goods or packages secured together to form an integral unit to facilitate handling, transport, Stacking and storage.

Test Method 4

4.1 Test Types

Substance or article may occur during transport high temperature, high humidity, low temperature, vibration, bumps and drops so on. Analyzing the substance or article If not too dangerous to transport test method includes two types of test, a first method for determining the thermal stability of the article; the second method and the third method using to determine the dangerous substances or substances that may occur due to falls.

4.2 Test conditions

The first method is suitable for the thermal stability of the test article, minimum test article is the smallest unit or a packaging unit individual unpackaged goods transport;

If the package is too large for the transport of not fit into the oven, the package should be made smaller load up as test article. The second method is applicable Test explosions in a homogeneous liquid; third method for testing unpackaged articles, packaging materials and packaging material fuel in addition to a homogeneous liquid Burning or explosion hazard.

A first thermal stability test method 4.3 unpackaged article and packaging an article

4.3.1 Principle

The sample was kept at constant temperature at a high temperature to observe the changes that occur after the specimen to be cooled. Issued by the specimen at a high temperature the reaction product, to determine whether the sample can transport.

4.3.2.1 Blast oven

Temperature can be maintained at $\pm 2\text{ }^{\circ}\text{C}$ $75\text{ }^{\circ}\text{C}$, automatic regulator with dual or protection to prevent overheating when the thermostat failure Device.

4.3.2.2 Temperature recorder

With thermocouple temperature recorder.

4.3.3 Sample preparation

The test sample is the smallest packaging unit, or unpackaged items. If the package is too large for the transport of not fit into the oven, it should be made Up to smaller packages loaded as test article.

4.3.4.1 Sample was placed

The sample to be tested conditions, the temperature of the thermocouple disposed on the recorder housing unpackaged articles, or packaging articles placed in the center of the package One article on the housing, into the oven together.

4.3.4.2 Heating

The oven was heated to $75\text{ deg.}]^{\circ}\text{C}$ holding 48h, then allowed to cool to room temperature oven, remove the sample.

4.3.4.3 Observations

Whether recording temperature changes were observed whether the sample reaction, damage or leakage.

4.3.5 Results found

4.3.5.1

If the sample temperature and unaffected appearance did not rise above $3\text{ }^{\circ}\text{C}$, the test results in terms of "-."

4.3.5.2

If the sample following phenomena occur, the test results counted as "", indicating that the