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

GB/T 14523-2007

Replacing GB/T 14523-1993

**Reaction to fire tests -- Ignitability of building products using a
radiant heat source**

对火反应试验 建筑制品在辐射热源下的着火性试验方法

(English Translation)

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Foreword

This standard is identical with ISO 5657:1997 "fire test fire test of building products using a radiant heat source response" (English Chinese Version).

For ease of use, this standard made the following editorial changes.

--- "This International Standard" be replaced by "this standard";

--- With a decimal point instead of a comma as the decimal point, "";

--- Deleted directory and international standards foreword.

This standard replaces GB/T 14523-1993 "building materials fire test methods." this standard and GB/T 14523-1993 compared to the main changes are as follows.

- The revised standard name is "test fire test building products using a radiant heat source for reaction to fire";
- Increasing the substantially flat surface, the article, the definition of a sample (this edition 3.3,3.8,3.9);
- Temperature monitor resolution is set to ± 2 °C (edition 7.6), the old standard resolution set at ± 1 °C (1993 edition of 3.3.2);
- Clear requirements for each different surface fire by preparing five samples (this version 6.1.1) in each irradiance level, and Older If the standard required to determine the actual or weak side face by the fire, then the weak side or actual test surfaces exposed to fire (1993 edition 5.5.2);
- Increased the thermal inertia of the test article's substrate and substrate requirements (edition 6.2);
- Means of increasing the electrical connections and prevent electronic interference requirements (edition 9.4);
- Radiation cone of radiation illumination requirements have been revised (1993 version 3.1.3, this version 7.2.2), while the amount of the radiometer Cheng requirements have been revised (edition 7.7);
- The new standard increased the reflective laminate requirements (edition 6.5);
- Increase the informative appendix "text annotations and Operation Guide" (see Appendix A);
- Increase the informative appendix "test application and limitations" (see Appendix B);
- Increase the informative appendix "higher heat flux" (see Appendix C);
- Increase the informative appendix "sustained surface ignition time alignment" (see Appendix D);
- Added "References." this standard Annex A, Annex B, Annex C and Annex D are informative appendices.

The standard proposed by the People's Republic of China Ministry of Public Security.

This standard by the National Standardization Technical Committee on Fire VII Technical Committee (SAC/TC113/SC7) centralized.

Introduction

Fire is a complex phenomenon. fire behavior and the impact depends on many interrelated factors, combustion performance of building materials and products by the nature of the fire, using methods and materials material environment where decision. "Reaction to fire"

test principle as the ISO/T R3814 in He explained.

This standard specifies the test methods for material potential fire hazard characteristics under conditions of heat radiation and ignition source, it can not work alone Guide for the direct evaluation of fire behavior and fire safety. However, this test can be used to compare the combustion behavior of materials in order to determine the material Ignitability.

The term "fire resistance" is defined in ISO 13943 under specified test conditions is due to the influence of an external heat source, the sample is ignited difficult Reciprocity. Fire risk assessment, fire is one of the combustion performance requires primary consideration. However, as the impact of the fire can not be built the main combustion performance of building fire development.

This test does not depend on the use of asbestos substrate.

Security Warning. Note combustion test, the specimen may produce toxic or harmful gases, can take appropriate precautions to protect the health, and pay attention to the use of A. 7 safety recommendations given.

GB/T 14523-2007/ISO 5657:1997 Reaction to fire tests of building products in a radiant heat source Fire Test Method

1 Scope

This standard specifies thermal radiation under specified conditions, the material thickness of no more than 70mm, the composite or component horizontally, its subject Fire Test Method fire surface.

Appendix A provides for interpretation of the text and operational guidance notes, in Appendix B gives a description of the limitations of the test.

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 2918 standard plastic sample conditioning and environmental tests (GB/T 2918-1998, idt ISO 291:1997) ISO 13943 Fire Safety Glossary ISO/T R14697 Reaction to fire tests of building products selected substrate Guide

3 Terms and Definitions

Established in ISO 13943 and the following terms and definitions apply to this standard.

Single material or finished composite material (including air-gap), such as sandwich panels.

In the building structure can usually identify the individual discrete composite materials, such as coatings or laminates.

Unevenness on the surface of a plane does not exceed $\pm 1\text{mm}$ of.

Heating the article surface subjected to the test conditions.

Irradiated contains this point is infinitely small bins on the energy flux to the surface of the cell area ratio.

Single substance or uniformly dispersed mixture, such as metal, stone, wood, concrete, mineral wool, polymer.

Any flame appears at the top of the fire plume samples, including sustained fire or flame briefly.

GB/T 14523-2007/ISO 5657:1997