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

GB/T 8323.2-2008

**Plastic - Smoke generation - Part 2: Determination of optical
density by a single-chamber test**

塑料 烟生成 第2部分：单室法测定烟密度试验方法

(English Translation)

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Foreword

GB/T 8323 "Plastic Smoke Generation" is divided into the following two parts.

--- Part 1. Guidelines for smoke density test methods;

--- Part 2. Test method for determination of smoke density by single chamber method.

This part is the second part of the standard GB/T 8323, equivalent to ISO 5659.2:2006 "Plastic - smoke generation --- Part 2 Points. Single-chamber Method for Measuring Optical Density, for editorial changes.

--- Removed the preface to ISO 5659.2:2006;

- Replace "this part of ISO 5659" with "this part of GB/T 8323";
- Replace the international standards cited in the standard with the corresponding national standards;
- Change some expressions applicable to international standards to those applicable to Chinese standards.

This part replaces GB/T 8323-1987 "Plastics Density Test Method for Plastics Burning Performance", compared with GB/T 8323-1987 the differences are as follows.

- Adding materials other than plastics in the scope of application (the original post-title suspension section, 1.1 of this edition);
- Increased the main purpose of this test method (1.3 of this edition);
- It is clear that the smoke generated by the material will vary according to the irradiance of the sample exposed, and the test mode is added to the test method.
And illuminance requirements (1.4 and 10.9.1 of this edition);
- Added normative references (Chapter 2 of this edition);
- Added 10 terms and definitions for assemblies, composites, irradiance, etc., removed the term flameless combustion test and flaming combustion Test 2 terms and definitions (Chapter 1 of the original, Chapter 3 of this edition);
- Added principle (Chapter 4 of this edition);
- Increased the distance between the sample and the radiation cone from the sample when the pre-test of the expansive material is 50mm (6.1.4 of this edition);
- The side length tolerance of the sample changed from "0-+0.5mm" to " ± 1 mm", and the thickness is specified as 25mm (original version 2.1, this edition) 6.2);
- The requirements for the sample liner are divided into three categories according to the thickness of the sample (6.4.2 of this edition);
- Added sample preparation requirements for elastic materials and thin airtight specimens (6.4.3 and 6.4.4 of this edition);
- The state adjustment time changed from 24h to the constant weight of the sample (Chapter 3 of the original, 6.5.1 of this edition), adding state adjustment Sample placement requirements (6.5.2 of this edition);
- Specified size and functional requirements for equipment (Chapter 4 of the original, Chapter 7 of this edition);
- Cancel the operation of covering the test box window with opaque curtain when the transmittance is less than 0.01% (the original 5.13);

- Increased the test environment (Chapter 8 of this edition);
- Added calibration of various parts of the device (Chapter 9 of this edition);
- The termination time of the test is the minimum or 10min transmittance (the original version of 5.14, 10.8 of this edition);
- Cancel the calculation formula of average smoke speed, calibration smoke density, and sample mass loss rate;
- Appendix A is changed from "Calibration and detailed description of test equipment (supplement)" to "Calibration of heat flow meter (normative appendix)";
- Appendix B changed from "Calculation example and supplementary calculation (supplement)" to "Variation of smoke specific optical density measured in single-chamber measurement" (informative appendix)";
- Added Appendix C "Determination of Mass Optical Density (Informative Appendix)" and Appendix D "Precision of Test Data for Expansive Materials (Information Sexual appendix)";
- Added references.

GB/T 8323.2-2008/ISO 5659-2:2006 Appendix A of this part is a normative appendix, and Appendix B, Appendix C and Appendix D are informative appendices.

This section was proposed by the China Petroleum and Chemical Industry Association.

This part is under the jurisdiction of the National Plastics Standardization Technical Committee General Method and Product Branch for Plastic Resins (SAC/TC15/SC4).

This section is responsible for drafting the unit. National Synthetic Resin Quality Supervision and Inspection Center.

Participated in the drafting of this section. Nanjing Jiangning District Analytical Instrument Factory, Guangzhou Blonde Technology Co., Ltd., National Plastic Products Quality Inspection Center (Fuzhou).

1 Scope

1.1

This part of GB/T 8323 specifies specimens of sheets, composites or specimens not exceeding 25 mm in thickness, placed vertically in a closed cabinet equipped with a specified level of heat radiation source, the side that generates smoke from the exposed surface is measured with or without a pilot flame.

law. This test method is applicable to all plastics and can also be applied to the evaluation of other materials (eg rubber, textile coverings, painted surfaces, Wood and other materials).

1.2

It should be noted that the optical density value of the smoke measured by this test method is measured under the specified shape and size of the sample or assembly.

It cannot be considered as its inherent basic performance.

1.3

This test is mainly used for R&D and fire safety engineering of buildings, trains, boats, etc., and cannot be used as the basis for building rating or Other purposes. There is no basis for predicting the smoke density produced by materials exposed to heat or flame under other (actual) combustion conditions, There is also no connection to the data obtained by other test methods. This test procedure eliminates the effects of irritants on the eye.

Note: This test procedure discusses the loss of vision due to smoke density, which is usually independent of irritancy, as explained in Section 1 of this standard.

1.4

It is important to emphasize that the smoke generated by the material will vary depending on the illuminance of the sample exposed. Therefore, at the junction using this method If it is confirmed, the sample should be exposed to the specified illuminance of 25kW/m² or 50kW/m².

2 Normative references

The terms in the following documents become the provisions of this part by reference in this part of GB/T 8323-2008. Any dated Reference documents, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouragement under this Part the parties that reached the agreement examined whether the latest version of these documents could be used. For undated references, the latest edition applies.

In this section.

GB/T 2918-1998 Standard environment for conditioning and testing of plastic specimens (idt, ISO 291:1997) GB/T 8323.1-2008 Plastics -- Part 1 . Guidelines for smoke density test method (ISO 5659-1:1996, IDT) ISO 13943 Fire Safety - Vocabulary

3 Terms and definitions

The following terms and definitions established by ISO 13943 apply to this section.

Articles of materials and/or composites.

Such as. three-layer sandwich panels.

Note: The assembly may contain voids.