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

GB/T 2406.1-2008

**Plastics -- Determination of burning behaviour by oxygen index
-- Part 1: Guidance
(English Translation)**

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1 Scope

1.1

This Part of GB/T 2406 constitutes a guidance document for the OI test. It provides information to guide the reader in the use of the test procedures described in Parts 2 and 3.

1.2 ISO 4589-2 describes a method for determining the minimum concentration of oxygen

by percentage volume in a mixture of oxygen and nitrogen introduced at $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ that will just support combustion of a material under specified test conditions. The results are defined as OI values. For comparative purposes, a procedure is also provided for determining whether or not the OI value of a material lies above some specified minimum value, which is particularly important for quality control purposes. There is also a procedure for the testing of thin films between 20 μm and 100 μm thickness.

1.3 ISO 4589-3 describes methods of carrying out the same determination over a range of temperatures typically between $25\text{ }^{\circ}\text{C}$ and $150\text{ }^{\circ}\text{C}$ (up to $400\text{ }^{\circ}\text{C}$ may be used). The results are defined as OI value at test temperature. ISO 4589-3 also describes a method for determining the temperature at which the OI of the small vertical test specimens is 20.9.

The result is defined as the flammability temperature. ISO 4589-3 is not applicable to materials having an OI value of less than 20.9 at $23\text{ }^{\circ}\text{C}$.

2 Normative References

The provisions in following documents become the provisions of this Part of GB/T 2406 through the reference in this Part. For dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

ISO 4589-2:1996, Plastics - Determination of burning behaviour by oxygen index - Part 2: Ambient-temperature test.

ISO 4589-3:1996, Plastics - Determination of burning behaviour by oxygen index - Part 3: Elevated-temperature test.

3 Test Principles

3.1

In ISO 4589-2, the material can be tested either as a rigid specimen or as a flexible Chinese Standards

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Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

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