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

GB/T 10007-2008

Replacing GB/T 10007-2008

**Rigid cellular plastics - Determination of shear properties
(English Translation)**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 10007-2008 "Rigid Foamed Plastics - Test Method for Shear Strength" and is consistent with GB/T 10007-2008.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

- The scope has been changed (see Chapter 1, Chapter 1 of the.2008 edition);
- The principles have been revised, and Method B has been added (see Chapter 4, Chapter 3 of the.2008 edition);
- The requirement to simultaneously record force and displacement when determining shear modulus and shear strain has been added (see 5.1.1);
- The installation principles for single-sample and dual-sample devices have been added (see 5.1.2 and 5.1.3);
- Displacement measurement has been added (see 5.3);
- The tolerances for parallelism and flatness between the two main surfaces have been changed (see 6.1, 5.1 in the.2008 edition);
- The dimensions of the double shear specimen have been increased (see 6.3);
- Conditioning and test temperature and humidity conditions have been added (see Chapter 8);

- Added experimental steps for Method B (see Chapter 9);
- The variable symbol, unit, and calculation formula for shear strength have been changed (see 10.1, 9.1 in the.2008 edition);
- The unit and calculation formula for shear modulus have been changed (see 10.2, 9.2 in the.2008 edition);
- A formula for fracture shear strain has been added (see 10.3).

This document adopts ISO 1922.2018 "Determination of shear properties of rigid foamed plastics".

The following minimal editorial changes have been made to this document.

- To align with existing standards, the standard title has been changed to "Test Method for Shear Properties of Rigid Foamed Plastics";
- The websites for ISO and IEC have been removed from the "Terms and Definitions" section.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Plastic Products (SAC/TC48).

1 Scope

This document describes the test methods for determining the shear strength, shear modulus, and shear strain of rigid foam plastics.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

linear dimensions)

Note: GB/T 6342-1996 Determination of linear dimensions of foamed plastics and rubber (ISO 1923.1981, IDT)

ISO 7500-1 Inspection and calibration of static uniaxial testing machines for metallic

materials - Part 1.Measurement of tensile and/or compressive stresses by these machines
uringsystem)

Note: GB/T 16825.1-2022 Inspection and Calibration of Static Uniaxial Testing Machines for Metallic
Materials - Part 1.Force Measurement of Tensile and/or Compressive Testing Machines

System testing and calibration (ISO 7500-1.2018, IDT)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Principles

Shear stress is applied to a specimen of a specified shape that is bonded to a rigid
specimen holder.

---Method A. Recommended for determining only shear strength;

---Method B. Measure displacement using an extensometer or similar device, and then
determine shear properties (shear strength, shear modulus, and shear strain).

It is recommended to use it at this time.

5.1.1 General Rules

The testing machine should be able to apply sufficient force within the maximum
displacement range of the shear test.

The testing machine should be able to move the movable clamp at a constant rate of
(1 ± 0.5) mm/min in a direction parallel to the longitudinal axis of the specimen assembly.

A Class 1 testing machine conforming to ISO 7500-1 shall apply force to the specimen and
cause the movable support to shift relative to the fixed support.

END: Draft Version (GB/T 10007-2026)