

ICS 83.100

CCS G 32



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

GB/T 6343-2009

Replacing GB/T 6343-1995

**Cellular plastics and rubbers - Determination of apparent
density**

泡沫塑料及橡胶 表观密度的测定

(English Translation)

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Foreword

This standard is identical to ISO 845:2006, Cellular plastics and rubbers - Determination of apparent density, and its technical content and text structure are identical to those of the latter.

It supersedes GB/T 6343-1995. The main changes are: the title is revised; the definition of volume density is deleted; the measuring error of the balance is changed from 0.5 % to 0.1 %; the number of specimens is unified as five; the special requirements for soft and semi-rigid materials are deleted and the description of conditioning is modified; the number of dimension measuring points is specified; the application of Formula (2) is changed from closed-cell materials below 30 kg/m³ to those below 15 kg/m³; the expression of accuracy is added; and the content of the test report is extended.

It was proposed by the China National Light Industry Council and is under the jurisdiction of the National Technical Committee on Plastic Products. Issued on 4 May 2009, in force since 1 November 2009. Classification: ICS 83.100, CCS G 32.

1 Scope

This standard specifies the method for determining the apparent density of cellular plastics and rubbers.

2 Normative references

GB/T 6342-1996 Cellular plastics and rubbers - Determination of linear dimensions; GB/T 2918-1998 Plastics - Standard atmospheres for conditioning and testing.

3 Terms and definitions

Apparent core density: the mass per unit volume of a sample after all skins formed during moulding have been removed.

4 Apparatus

4.1

Balance

Accurate to 0.1 %. 4.2 Measuring instruments: in accordance with GB/T 6342-1996.

5 Test specimens

5.1

Dimensions

Each specimen shall have a shape whose volume can easily be calculated, and shall be cut without deforming the original cell structure. It should be as large as the apparatus and the shape of the original material allow, and its total volume shall be at least 100 cm³. For rigid materials, where the apparent overall density is determined on a specimen cut from a larger sample, the ratio of moulded skin area to total volume shall be the same for the specimen as for the sample.

5.2

Number

At least five specimens shall be tested. The sample may be a manufactured object whose mass and volume can be measured accurately, in which case its total mass and volume may be used.

5.3

Conditioning

Wait at least 72 h after manufacture before cutting the specimens; this may be reduced to 48 h or 16 h where experience shows the density then differs from the 72 h value by less than 10 %. The specimen shall be kept for at least 16 h in a standard atmosphere of GB/T 2918-1998 - (23 ± 2) °C and (50 ± 10) %, (23 ± 5) °C, or (27 ± 5) °C - or in a desiccator at (23 ± 2) °C or (27 ± 2) °C. This period may form part of the 72 h.

6 Procedure

6.1

Measure the dimensions of the specimen in millimetres in accordance with GB/T 6342-1996, making at least three separate measurements of each dimension and at least five measurements of the central area for rigid materials in board form; calculate the mean of each dimension and from them the volume of the specimen.

6.2

Weigh each specimen to an accuracy of 0.5 % and record its mass in grams.

7 Expression of results

7.1

The apparent density is calculated with Formula (1) and the average is taken, to an accuracy of 0.1 kg/m³.