



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

GB/T 15048-1994

Cellular plastics, rigid - Determination of compressive creep

硬质泡沫塑料压缩蠕变试验方法

(English Translation)

Issued on: April 12, 1994

Implemented on: December 1, 1994

Issued by: State Bureau of Quality and Technical Supervision

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1 Subject content and scope of application

This Standard specifies the method for determining the compressive creep of rigid cellular plastic specimens under specified stress, temperature and relative humidity conditions.

This Standard applies to various rigid cellular plastics.

2 Normative references

GB 2918, Standard atmospheres for conditioning and testing of plastic specimens
GB 6342, Cellular plastics and rubbers - Determination of linear dimensions

3 Principle

Under specified temperature and relative humidity conditions, the specimen produces compressive deformation under constant pressure. Measure the change of compressive strain over time.

Calculate the initial deformation percentage and compressive creep percentage of the specimen.

4.1 Test chamber

A constant temperature and humidity test chamber that can meet the requirements of 7.1 and 7.2.

4.2 Thickness measuring instrument

Shall comply with the requirements of GB 6342.

4.3 Loading device

The loading device consists of two parallel plates and weights. The two parallel plates shall be able to compress the specimen vertically. One of the two plates is a movable plate with a guide device, and its lateral displacement shall be less than 1mm. The two parallel plates shall not deform during the test. During the test, it shall be available to measure the thickness of the sample to an accuracy of 0.1 mm.

The loading device shall be kept level and free from vibration during the test.

5.1 Shape and size

The specimen shall be a rectangular parallelepiped or cylindrical object with a load-bearing cross-sectional area of at least 25 cm² and a standard specimen thickness of 50 ± 1 mm. The minimum thickness of the specimen is 20 mm. When the thickness exceeds 50 mm, the cross-sectional area under load shall not be less than the square of the thickness. The thickness deviation between the two surfaces of the specimen being tested shall not exceed 1% of the thickness. For products with skin during use, the specimen shall retain the product skin.

Test results on materials with or without skin or of different thicknesses are not comparable.

5.2 Preparation

Cut the specimen from the sample, and the thickness direction of the specimen shall be consistent with the pressure direction of the product when it is finally used.

The specimen can be cut with a saw, knife or other cutting tools, ensuring that the specimen is not damaged.

5.3 Number of specimens

Under the same test conditions, each group shall have no less than three specimens.

6.1 Test conditions

The test shall be carried out in accordance with the standard environment and normal deviation range specified in GB 2918, and the time shall not be less than 24 hours.

6.2 Creep test method carried out by applying pressure under standard ambient conditions (Method A)

6.2.1

After state adjustment, measure the thickness of the specimen to an accuracy of 0.1 mm. Measure at least four points of each specimen and calculate the average thickness H_1 .