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HG

**CHEMICAL INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

HG/T 2876-2009

**Cellular material fo rubber-plastics shoes. Determination of
compression set
(English Translation)**

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1 Scope

This standard specifies the test method for the compressive set of cellular material for rubber-plastics shoes.

This standard applies to the determination of compression set of cellular material for rubber-plastics shoes.

2 Normative references

The provisions in following documents become the provisions of this standard through reference in this standard. For the 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.

GB/T 2941 Rubber - General procedures for preparing and conditioning test pieces for physical test methods (GB/T 2941-2006, idt ISO 23529.2004)

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1

Compression set

The rate of change of the geometrical dimension produced in the direction of the force of the specimen after the external force which causes the compressive deformation is completely removed.

4 Principle

The cellular material of rubber-plastics shoes is compressed by external force, the material will deform along the direction of the force. When the external force is removed, the material still cannot be restored to its original geometry. In the

The thickness is $10.0 \text{ mm} \pm 0.2 \text{ mm}$. Grind it according to the provisions of GB/T 2941. For the finished shoes, it may take sample from the cellular heel bottom.

6.2 If the thickness of the specimen is less than 10 mm, it may bond two layers.

After letting it be standing for 2 h, prepare it into a specimen. However, the test results cannot be compared with the test results of the standard specimen.

6.3 The surface of the specimen shall be flat and shall not be left with a patterned or dense skin. The compressed surface is consistent with the compression surface of the finished shoe when it is in use.

7 Conditioning of specimen and test environment

7.1

The storage of samples and specimens shall be carried out in accordance with the provisions of GB/T 2941.

7.2

The test shall be carried out under the standard temperature and humidity of the laboratory in accordance with the provisions of GB/T 2941.

8 Test steps

8.1

Number the specimen. Measure the geometry of the specimen.

8.2

Use a vernier caliper to measure the length and width of the specimen, accurate to 0.02 mm.

8.3 Use a thickness gauge to measure the height before and after compression

of the specimen, accurate to 0.01 m.

8.4 The number of specimens for each sample shall be not less than three. The height of the same set of specimens shall not differ by more than 0.1 mm.

8.5 Place the specimen in the fixture. Tighten the nut to the ring stopper. The specimens shall have sufficient spacing in the fixture, so that the specimens do not come into contact with one another when compressed.

8.6 The compression time is $72\text{ h} \pm 2\text{ h}$. Take out the specimen after reaching the time. Let it be standing for 2 h. Then measure the height of specimen after restoration.

9 Test results

The compression set of the specimen is calculated by the following formula.

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