

CCS Q 40



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

GB/T 3002-2017

Replacing GB/T 3002-2004

**Refractory products -- Determination of modulus of rupture at
elevated temperatures**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 3002-2004 "high temperature refractory refractory strength test method", compared with the GB/T 3002-2004,

The main technical changes are as follows.

- Reference standard increased GB/T 4513.5, GB/T 4513.6 and GB/T 7321;
- Increase Note. "For other sizes of the sample, the span can be adjusted accordingly";
- Removed the provisions of paragraph 5.3.2 and Appendix A of the temperature distribution measurement;
- Equipment to increase "vernier caliper";
- Increase "the preparation of shaped products in accordance with GB/T 7321 for";
- Increase "amorphous refractory preparation in accordance with GB/T 4513.5";
- Increase "the minimum length of the sample is 100mm, the minimum width and height of 10mm."
- Increase the "amorphous refractory sample size in accordance with the relevant provisions of GB/T 4513.6 implementation."

This standard uses redrafted Law Amendment uses ISO5013.1985 "refractory products high temperature flexural strength test method."

This standard compared with ISO 5013.1985 in the structure there are more adjustments, Appendix A lists the standard and ISO 5013.1985

Section number control list.

This standard compared with ISO 5013.1985 there are technical differences, Appendix B lists the standard and ISO 5013.1985 technology

Sex differences and their causes list.

Please note that some of this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

This standard by the National Refractory Standardization Technical Committee (SAC/TC193) and focal point.

This standard was drafted unit. Sinosteel Luoyang Refractory Research Institute Co., Ltd., Zhengzhou Ruitai Refractory Technology Co., Ltd. Beijing Lier

High Temperature Materials Co., Ltd., Zhejiang independent high temperature Technology Co., Ltd.

1 Scope

This standard specifies the refractory refractory strength of the test method of the principle, equipment, samples, test steps, the results of calculation and test report

To wait.

This standard applies to shaped and amorphous refractory materials.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 4513.5 amorphous refractory materials - Part 5. Preparation and pretreatment of test specimens (GB/T 4513.5-2017, ISO 1927-5.

2012, MOD)

Unshaped refractory materials - Part 6. Determination of physical properties (GB/T 4513.6-2017, ISO 1927-6.

2012, MOD)

GB/T 7321 shaped refractory products sample preparation method

GB/T 8170 rounded repair rules and limit values of the representation and judgment

GB/T 10325 Shaped refractory products sampling inspection rules (GB/T 10325-2012, ISO 5022.1979, NEQ)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Flexural strength modulus of rupture

A sample of refractory strip of a certain size, the maximum stress that can be sustained on a three-point bending apparatus.

3.2

Test temperature

The temperature at the midpoint of the specimen tension plane (see 5.3).

4 principle

The sample is heated to the test temperature, incubated to a specified temperature profile, and a constant load rate is applied until the sample breaks.

5.1 loading device

5.1.1 The loading device shall have two lower blades and one upper blade. The three blades shall be parallel to each other. For the standard specimen two support blade

The distance between (125 $\pm$ 2) mm. The upper knife edge should be placed in the middle of the two lower knife edge, accurate to $\pm$ 2mm (see Figure 1).

Note. For other sizes, the span can be adjusted accordingly.