

ICS 81.080

CCS Q40



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

GB/T 14983-2008

Replacing GB/T 14983-1994

Refractory products - Determination of alkali-resistance

耐火材料 抗碱性试验方法

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Foreword

This standard replaces GB/T 14983-1994 "Standard Test Method for basic refractories."

This standard and GB/T 14983-1994 main differences are as follows:

- Eliminated by alkali to evaluate the rate of change of the line before and after the alkali resistance of the way;
- Increased widely melting crucible method alkali alkali resistance test method;
- Increase applicable to strong alkali-resistant refractory coating method molten alkali buried alkali resistance test methods. This standard by the National Standardization Technical Committee Refractories and centralized. This standard was drafted. Sinosteel Luoyang Institute of Refractories, Gongyi refractory Mastery Zhongyuan Technology Co., Ltd. Shanxi Xixiaoping resistance Fire Material Co., Ltd. The main drafters of this standard. Xiu-Fang Wang, Zhang Yi, Zhu Lihui, Wang Wenwu, Li Xianming, Kang Huarong, Haoliang Jun, Zhang Deyi. This standard supersedes the previous release version of the case.
- GB/T 14983-1994. Test methods for basic refractories

1 Scope

GB/T 14983-2008 is the Chinese national standard on refractory products - determination of alkali-resistance, in the field of glass and ceramics industries. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 3 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2008. Classification: ICS 81.080, CCS Q40. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the test methods for anti-alkaline refractory principles, equipment, samples, test procedures, evaluation of results and test report. This standard applies to the determination of basic refractories.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 5072 Refractory cold crushing strength
 GB/T 7321 sample preparation method shaped refractory products
 GB/T 8170 numerical rounding rules
 GB/T 10325 Shaped refractory products - Sampling and acceptance testing
 GB/T 16839.1 Part 1 thermocouple indexing table
 GB/T 16839.2 thermocouple Tolerance Part 2
 GB/T 17617 refractory raw materials and monolithic refractories sampling
 GB/T 18930 refractory term

3 Terms and Definitions

Terms and definitions GB/T 18930 apply to this standard established. 4 1 (alkali vapor method) This method is applicable to the determination of anti-alkaline shaped refractory products.

4.1 Principle At a temperature of 1100 °C, potassium carbonate (K_2CO_3) and charcoal produced by the reaction of alkali vapor sample of refractory erosion occurs, generating New alkali metal silicate and carbonate compound, the material property change.

4.2 Equipment and Materials

4.2.1 Test Furnace, alkali horizontal furnace test (see Figure 1), the maximum heating temperature was 1300 deg.] C, the furnace diameter not less than 110mm, Paul During the warm temperature zone length not less than 100mm, the temperature difference is not greater than ± 10 °C.

4.2.2 Temperature measurement and control device

4.2.2.1 Temperature measurement with thermocouple protection tube. Thermocouples

should be consistent with GB/T 16839.1 and GB/T 16839.2 requirements.

4.2.2.2 temperature control system should be able to heat up according to the procedure prescribed.

4.2.3 graphite crucible, an inner diameter of 80mm, a wall thickness of 5mm, high 80mm. Crucible cover and crucible coarse threaded connections.

4.2.4 electric oven.

4.2.5 vernier caliper or other measuring accuracy of 0.1mm.

4.2.6 scales, dividing the value of 0.1g.

4.2.7 Reagents, when charcoal powder particle size less than 2.0mm, must first bake at 150 °C 30min. Potassium carbonate (K_2CO_3) is chemically pure, both