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

GB/T 2273-2007

Replacing GB/T 2273-1998

Sintered magnesia

烧结镁砂

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Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard replaces GB/T 2273-1998 "sintered magnesite." This standard and GB/T 2273-1998 compared to the following changes.

--- MS97 grade level reclassification. canceled a standard Class A, B and C will be adjusted to the A and B having a particle bulk density Of 3.35g/cm³ and 3.30g/cm³ adjusted to 3.33g/cm³ and 3.28g/cm³;

--- MS96, MS95 and MS90 away with grades A and B grade;

--- Increased MS94 and MS92 grades canceled MS93 grade;

--- Affordable sintered magnesite CaO content limit values $\leq 1.6\%$ and $\leq 2.0\%$ by the adjustment were $\leq 1.8\%$ and $\leq 2.5\%$. This standard by the National Standardization Technical Committee Refractories and centralized. This standard drafting of the main unit. Liaoning Provincial People's Government of magnesium resource protection office, Metallurgical Industry Information Standards Institute. It participated in the drafting of this standard. Jiachen Group, Haicheng after the British Group, Haicheng Huayu Group, the Western Group, Yingkou blue group. The main drafters of this standard. Wang Jue, Wangzhao Min, Gao Jianping, the whole jump, Wei, Chenshu Jiang. This standard replaces the standards previously issued as follows: GB/T 2273-1988, GB/T 2273-1998. Sintered magnesite

1 Scope

China's national product standard for sintered magnesite. It specifies the grades, the technical requirements, the test methods, the quality assessment procedures and the packaging, labelling, transport, storage and quality certificate, and it applies to sintered magnesite for the production of refractories. Sintered magnesite is the raw material behind every basic refractory: the magnesite carbon brick of a converter, the magnesite and magnesite-alumina bricks of a furnace roof, the magnesite ramming and gunning materials, and the linings of cement and lime kilns. It is made by burning magnesite, or by precipitating magnesium hydroxide from seawater or brine and calcining it, at temperatures

high enough to shrink the material to near its theoretical density. That last part is what distinguishes it from ordinary calcined magnesia and it is what the buyer is paying for: a dense, coarsely crystalline grain with little open porosity, in which the periclase crystals are large and the silicate impurities are confined to the pockets between them rather than forming a continuous film. A film of low-melting silicate around the periclase grains is what destroys a basic refractory in service, because it softens and the structure loses strength at temperature. So the standard grades the material on what governs that: the magnesium oxide content, the calcium oxide to silica ratio, which determines which silicate phases form and at what temperature they melt, the boron oxide content, which is a poison at very low levels because it forms a very low-melting phase, the iron and alumina, the bulk density, and the crystal size. The quality assessment and sampling rules complete it. Issued on 29 December 2007 and in force since 1 June 2008, it replaces GB/T 2273-1998.

This standard specifies grades, technical requirements, test methods, quality assessment procedures and packaging, labeling, transportation, storage and quality sintered magnesia certificate. This standard applies to the production of sintered magnesia 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 2007.7 bulk minerals sampling and sample preparation method for determination of size by General manual sieving

GB/T 2999 refractory particles of bulk density

GB/T 5069 Methods for chemical analysis of Mg-Al refractories

GB/T 17617 refractory raw materials and monolithic refractories sampling

GB/T 18930 refractory term YB/T 5142 General provisions metallurgy mineral products packaging, marking and quality certificate

3 Terms and Definitions

GB/T 18930 and established in the following terms and definitions apply to this standard.

3.1 Sintering is not enough, loose structure.

3.2 Product non-calcined magnesium stone formation, such as black blocks, melt remaining tumor and coke and the like. Grade

4 Sintered magnesia by physical and chemical indicators are divided into 14 grades, see

Table 1. The grades of magnesia MS Pinyin prefix, followed by numbers Representative mass percentage of magnesium oxide, alphanumeric after showing the same brand of different levels.

5 Technical requirements

5.1 sintered magnesia physical and chemical indicators should meet the requirements in Table 1.

5.2 sintered magnesia particles agreed by both parties.

5.3 sintered magnesia appearance shall meet the following requirements.

--- MS98, MS97 and MS96 other brands can not be mixed due to burning products and impurities;

--- MS95, MS94, MS92 and MS90 and other brands, block size greater than 30mm, the surface area due to burning products and impurities shall not exceed The surface area of magnesia block 1/4; 5mm ~ 30mm block size, the surface area due to burning products and impurities shall not exceed the magnesia block 1/2 of the surface area;

--- MS88, MS87, MS84 and MS83 and other brands, block size greater than 30mm, the surface area due to burning products and impurities shall not exceed