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

GB/T 12215-2019

Replacing GB/T 12215-1990

Bauxite sand and flour for investment casting

熔模铸造用铝矾土砂、粉

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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 12215-1990 "aluminum bauxite sand and powder for investment casting". This standard is compared with GB/T 12215-1990. The main technical content changes are as follows:

- Revised the definition of bauxite sand and bauxite powder for investment casting (see 3.1, 3.2, 1990, 3.1, 3.2);
- Revised the definition of bauxite sand fines (see 3.3, 3.6 of the 1990 edition);
- Removed weight average particle size, weight mean square error, total surface area of 100 grams of powder (1990 version 3.3, 3.4, 3.5);
- Revised the harmful impurities content of bauxite clinker (see 4.2.1, 4.2.1 of the 1990 edition);
- Revised the fine content of bauxite sand (see 5.3, 1990 edition of 5.3) and its detection method (see 6.3, 6.3 of 1990 edition);
- Increased the partial grouping code of the alumina bauxite grain size (see 4.3.1);
- Revised the particle size grouping of alumina bauxite powder and its indicators (see 4.3.2, version
- Revised the representation method of the bauxite sand grade (see 4.4.1, version 4.4.1 of the 1990 edition);
- Increased the standard number and date of manufacture in the bag logo (see 8.2). This standard is proposed and managed by the National Foundry Standardization Technical Committee (SAC/TC54). This standard was drafted. First Tractor Co., Ltd., Dongying

Jiayang Precision Metal Co., Ltd., Dongfeng Precision Casting Co., Ltd. Anhui Yingliu Hangyuan Power Technology Co., Ltd., Guizhou Anji Aviation Precision Casting Co., Ltd., Zhengzhou Xiangyu Foundry Materials Co., Ltd. Henan Jinnyuan New Material Technology Co., Ltd., Shanghai Honggang Power Station Equipment Casting & Forging Co., Ltd., Shenyang Foundry Research Institute Co., Ltd. The main drafters of this standard. Li Fengjun, Guo Yahui, Wang Shijie, Wei Zhiyu, Ma Bo, Wang Yonghua, Lan Yong, Chu Dezhi, Xu Haizhen, Feng Yinping, Zhang Xin, Xu Hongli, Duan Jidong, Li Xinglong, Cao Debing, Tian Chao, Wang Zheng, Zhu Jianwei, Kang Xiao, Chen Qun, Cheng Nan, Wu Tieming, Xu Demin, Wang Ting. The previous versions of the standards replaced by this standard are.

1 Scope

GB/T 12215-2019 is the Chinese national standard on bauxite sand and flour for investment casting, in the field of construction materials and building. 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 30 August 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2020. Classification: ICS 91.100.15, CCS J31. 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 terms and definitions of aluminum bauxite sand and powder for investment casting, classification, classification, grouping and grades, technical requirements, test methods. Law, inspection rules, packaging and storage. This standard applies to aluminum bauxite sand and powder for investment casting.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2684 casting sand and mixture test method

GB/T 5611 casting terminology

GB/T 6900 Aluminum-silicon refractory chemical analysis method

GB/T 7322 refractory test method for refractory

3 Terms and definitions

The following terms and definitions as defined in GB/T 5611 apply to this document.

3.1 Investment in aluminum bauxite sand bauxitesandforinvestmentcasting Refractory particles containing Al_2O_3 as the main component and having an Al_2O_3 content of not less than 65% and a particle diameter of

0.075 mm to

3.2 Bauxiteflourforvestmentcasting for investment casting A refractory particulate material having Al_2O_3 as a main component and an Al_2O_3 content of not less than 65% and a particle diameter of

0.075 mm or less.

3.3 Fine powder content The mass of the particles having a particle diameter greater than or equal to

0.020 mm and less than

0.075 mm is a percentage of the total mass of the sand sample.

4 Classification, classification, grouping and branding

4.1 Classification The bauxite sand and powder are classified according to the main crystal phase after calcination, as shown in Table 1. Table

1 Classification of main crystal phase after calcination of bauxite sand and powder Serial number classification main crystal phase /% refractoriness/ $^{\circ}\text{C}$

1 Alumina bauxite clinker corundum mullite ≥ 90 ≥ 1770 2 bauxite composite mullite ≥ 80 ≥ 1790 GB/T 12215-2019 (Bauxite sand and powder for investment casting) ICS

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