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

GB/T 4155-2012

Cerium oxide

氧化铈

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Quarantine;
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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Gd₂O
- 11 Nd₂O

Foreword

This standard is in accordance with GB/T 1.1-2009 given rules drafted. This standard replaces GB/T 4155-2003 "cerium oxide." This standard compared with GB/T 4155-2003, the main technical changes are as follows:

- Deleted grades 021 015, 021 018 and its corresponding grade assessment indicators;
- Increased by 021,045 grade, 021,050 grade, grade 021 025 and its corresponding evaluation indicators;
- 021 045 new grades, 021,050 grade, rare earth impurities in its assessment index of "component" means;
- 021,025 new grade rare earth impurities assessment indicators with "Closing amount" means;
- Increased grades 021040A, grades 021040B, grade 021 045 granularity assessment index;
- Increased grade 021 035, 021 030 in grades sulfate assessment indicators;
- Adjusted grades 021040A, grades 021040B, 021,035 grade, 021,030 grade, 021,020 grade non - rare earth impurities test Nuclear targets. This standard by the National Standardization Technical Committee of rare earth (SAC/TC229) centralized. Drafting of this standard. Jiangyin Jiahua Advanced Material Resources Co., Ltd., Inner Mongolia Baotou Steel Rare Earth (Group) Company Limited tech Secretary, Xiamen Topstar New Materials Co., Ltd., Jiangmen City, Guangdong Branch Hang Industrial Co., Ltd. The main drafters of this standard. OF ADMINISTRATIVE Xiao Rui, Xie Jianwei, Wang Jing, Haogao Hui, Wei Lan, Huang Rui sweet. This standard replaces the standards previously issued as follows:
- GB/T 4155-1984, GB/T 4155-1992, GB/T 4155-2003. Ceria

1 Scope

China's national standard for cerium oxide. It specifies the requirements, the test methods

and the inspection rules. Cerium is the most abundant rare earth, more common in the crust than copper, and its oxide is the workhorse of the family. It is the polishing compound for optical and display glass, and it polishes by a chemical mechanism rather than by abrasion, which is why nothing has replaced it for finishing a lens or a screen. It is the oxygen storage component of automotive catalysts, cycling between two oxidation states to buffer the exhaust as the engine's mixture fluctuates. It absorbs ultraviolet, so it is added to glass that must not yellow. And it is a polishing and planarisation abrasive in semiconductor manufacture. The grades in the standard span all of that, from the technical material used by the tonne in glass to the high purity product needed where a transition metal impurity would poison a catalyst or scratch a wafer.

This standard specifies the requirements, test methods, inspection rules, cerium oxide and the packaging, labeling, transportation, storage and quality certificate. This standard applies to chemical method were available for the production of glass, ceramics, electronics, light emitting material and cerium oxide polishing powder used.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated edition applies to this article Member. For undated references, the latest edition (including any amendments) applies to this standard.

GB/T 8170 rounding off rules and limit values \u200b\u200band expressed determination

GB/T 12690 non - rare earth impurities in rare earth metals and their oxides chemical analysis methods

GB/T 14635 chemical analysis of rare earth metals and compounds

GB/T 16484.12 earth chloride and light rare earth carbonate Chemical analysis methods of measuring the amount of sulfate

GB/T 17803 grades representation of rare earth products

GB/T 18115.2 earth metals and their oxides of rare earth impurities in chemical analysis methods of lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, Dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium content Determination of physical properties of metals and their compounds determination of particle size distribution of the rare earth compound GB/T 20170.1

3 Gd₂O₃

3 Tb₄O₇ 0.00015 0.0001 0.0001 0.0001 0.0001 0.00005 0.00005 0.00005 0.001 0.002
0.002 0.015 0.001 0.002 0.002 0.015 0.0005 0.001 0.001 0.005 0.0005 0.001 0.001 0.005
0.001 0.002 0.002

0.005 the remaining Combined amount

0.001 the remaining Combined amount

0.002 the remaining Combined amount

0.002 the remaining Combined amount

0.005 Combined amount

0.1 Combined amount

0.5 Combined amount

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