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

GB/T 4154-2015

Lanthanum oxide

氧化镧

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 4154-2006 "lanthanum oxide." This standard compared with GB/T 4154-2006, the main technical changes are as follows:

- Adds character designation (see Chapter 3);
- Increased grades 011,055, assessment of all rare earth impurities and some non-rare earth impurity element (see Table 1);
- 011 050 modified grades of all rare earth impurities assessment indicators, will be part of the assessment for the assessment of all rare earth impurities in rare earth impurities modification; While the non-modified rare earth impurities of silica, lead and chlorine assessment indicators (see Table 1);
- In Grade 011 045, 011 040, in addition to grades of cerium, praseodymium, neodymium, samarium and yttrium assessment, the increase of other rare earth impurities Assessment, with the "combined amount," said the revised grades 011,045 non - rare earth impurities of lead and chlorine assessment indicators (see Table 1);
- Revised assessment index grades 011,020 non - rare earth impurities in calcium and chlorine, the new lead (Pb) assessment indicators (see Table 1);
- Increase for all grades of non-rare earth impurities in sodium evaluation indicators (see Table 1);
- Added grades 011,030 and 011,025 non-rare earth impurities sulfur assessment indicators (see Table 1);
- An increase of 011,055 grade, 011,050 grade, 011,045 grade granularity assessment index, modify the size of the 011,040 grade Scope of examination (see Table 1). This standard by the National Standardization Technical Committee of rare earth (SAC/TC229) and focal points. Drafting of this standard. Jiangyin Jiahua Advanced Material Resources Co., Ltd., Guangdong Zhujiang Rare Earth Co., Ltd. The main drafters of this standard. and Zhu Ping, Lixing Rong, Xu Qiuxia, Xie Jianwei, Jin Yanhua, Nam Hung Yao. This standard

replaces the standards previously issued as follows:

--- GB/T 4154-1984, GB/T 4154-1993, GB/T 4154-2006. Lanthanum oxide

1 Scope

China's national standard for lanthanum oxide. It specifies the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage.

Lanthanum is the first of the rare earths and among the most abundant, and its oxide is one of the higher tonnage products of the separation plants. Its uses turn on two properties. It has an unusually high refractive index with low dispersion, which makes it the essential component of the optical glasses used in camera and microscope objectives - a lens designer's choice of lanthanum glass is what allows a compact lens to correct chromatic aberration. And in the fluid catalytic cracking catalysts of oil refineries it stabilises the zeolite structure against the steam and heat of regeneration, which is by volume the largest single use of any rare earth. The purity grades in the standard reflect that split, since optical glass demands a cleanliness that catalysis does not.

This standard specifies the requirements of lanthanum oxide, test methods, inspection rules and packaging, labeling, transportation, storage and quality certificate. This standard applies to extraction or other methods prepared for the production of metallic lanthanum, optical glass, ceramics, catalysts, electronic components used Lanthanum oxide.

2 Normative references

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

GB/T 8170 repair value represents about rules and limit values and judgment

GB/T 12690 (all parts), oxides of rare earth metals and their chemical impurity analysis of Central Africa Determination of

GB/T 14635 method for chemical analysis of rare earth metals and rare earth compound total

GB/T 17803 grades representation of rare earth products

GB/T 18115.1 of the rare earth metals and their oxides impurities in chemical analysis methods cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, Dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium content Determination of

GB/T 20170.1 physical properties of metals and their compounds determination of particle size distribution of the rare earth compound

3 Requirements

3.1 Categories Product by chemical composition into La₂O₃-5N₅, La₂O₃-5N, La₂O₃-4N₅, La₂O₃-4N, La₂O₃-3N, La₂O₃-2N₅, La₂O₃-2N seven brands, product grades representation shall comply with GB/T 17803 of.

3.2 Chemical composition Chemical composition of the product shall comply with the provisions in Table 1. If you have special requirements of the demand side, both supply and demand can be negotiated. Table

5 La₂O₃-4N La₂O₃-3N La₂O₃-2N

5 La₂O₃-2N Corresponding to the original digital brands 011 055 011 050 011 045 011 040 011 030 011 025 011 020 Chemistry ingredient (quality fraction) REO, not less than 99.0 99.0 99.0 99.0 99.0

99.0 La₂O₃/REO, not less than 99.9995 99.999 99.995 99.99 99.9 99.5