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

GB/T 31968-2025

Replacing GB/T 31968-2015

Rare earth composite yttrium zirconium oxide ceramic powder

稀土复合钇锆陶瓷粉

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document replaces GB/T 31968-2015 "Rare earth composite yttrium zirconium ceramic powder". Compared with GB/T 31968-2015, in addition to the structural adjustment In addition to editorial changes, the main technical changes are as follows.

- a) The application areas of the products in the scope have been changed (see Chapter 1, Chapter 1 of the 2015 edition);
- b) The number and brand of product brands have been changed (see Chapter 4, 3.1 of the 2015 edition);
- c) The Y₂O₃ and Al₂O₃ contents of each grade have been changed (see 5.1, 3.3 of the 2015 edition);
- d) The expression method and chemical composition content of ZrO₂ and HfO₂ have been changed (see 5.1, 3.3 of the 2015 edition);
- e) Added the grade index for the center particle size between 0.1 μm and 0.4 μm (see 5.2);
- f) The provisions on total radioactivity specific activity and specific surface area have been modified (see 5.2, 3.4 of the 2015 edition);
- g) The analytical methods for Y₂O₃, Fe₂O₃, Al₂O₃, Na₂O, TiO₂ and Cl⁻ have been changed (see 6.1, 4.2 of the 2015 edition);
- h) Added the test method for total radioactivity specific activity (see 6.2.4);
- i) Added "Sample pretreatment and preparation of analytical solution for determination of silicon oxide content in rare earth composite yttrium zirconium ceramic powder" (see Appendix A);

j) Added "Sample pretreatment and preparation of analytical solution for determination of chlorine content in rare earth composite yttrium zirconium ceramic powder" (see Appendix B).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Rare Earth Standardization Technical Committee (SAC/TC 229).

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This document was first published in 2015 and this is the first revision.

Rare earth composite yttrium zirconium ceramic powder

1 Scope

This document specifies the classification, technical requirements, inspection rules, marking, packaging, transportation, storage and accompanying documents of rare earth composite yttrium zirconium ceramic powder.

The corresponding test method is described.

This document is applicable to rare earth composite yttrium zirconium ceramic powders made by chemical or physical methods, used to make structural ceramics, bioceramics, electronic ceramics Porcelain, etc.

2 Normative references

GB/T 6682

GB/T 8170

GB/T 12690.2

GB/T 12690.3

GB/T 12690.7-2021

GB/T 12690.9

GB/T 17803

GB/T 20170.1-2006

GB/T 20170.2

GB/T 31057.1

GB 39176

GB/T 43358

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Categories

The product is divided into 24 grades according to chemical composition and physical properties, see Table 1 for details. The product grade representation method should comply with GB/T 17803 regulations.