

ICS 77.120.99

CCS H 65



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

GB/T 31965-2015

Praseodymium-neodymium oxides

镨钕氧化物

Issued on: September 11, 2015

Implemented on: August 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Balance Balance Balance Balance Impurity
- 11 Nd2O

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Standardization Technical Committee of rare earth (SAC/TC229) and focal points. This standard is mainly drafted by: Qiandong Rare Earth Group Co., Ltd., Jiangxi Southern Rare Earth High-tech Co., Yixing Xinwei Lee Cheng Rare Earth Co., Ltd., Sichuan Leshan Rui Feng Metallurgical Co., Ltd., Xuzhou Golden Shipeng Yuan Rare Earth Material Factory, China North Rare Earth (Group) High Technology Co., Ltd., Hunan Yiyang Hongyuan Rare Earth Co., Ltd., Baotou Huamei Rare Earth Hi-Tech Co., Ltd. The main drafters of this standard. Gong Bin, double Cai, Hu Limin, Nam Hung Yao Wen Bin, Zeng Haiyan, Zhangshao Fu, Gong Fang, Zhoujun Hai, Zou Bin, Pingxin Rui, Dan Cuiping, Mugen Liu, Zhou Xiaodong, Chen Yuehua, Wen informed, Li Peizhong, high HC, Xie Jianwei, Xiao Rui. Praseodymium neodymium oxide

1 Scope

China's national product standard for praseodymium-neodymium oxide. It specifies the requirements, the test methods, the inspection rules and the packaging, marking, transport, storage and quality certificate for the product, and it applies to the praseodymium-neodymium oxide obtained by extraction from rare earth ores and from recycled neodymium iron boron material, used for preparing praseodymium-neodymium alloy and as an additive in glass, ceramics and similar applications. Praseodymium and neodymium are the two rare earths that make permanent magnets, and they are sold together for a reason of chemistry rather than convenience: they are adjacent in the lanthanide series, they occur together in the same ores, and separating them from one another is far harder and more expensive than separating either from the rest of the rare earths. For the largest application, neodymium iron boron magnets, the separation is also unnecessary, because praseodymium substitutes for neodymium in the magnet without harm. So the industry stops at the didymium mixture and sells it by its neodymium fraction. That is exactly how this standard grades the product: four grades defined by the neodymium content of the rare earth oxide, at nominally 85, 80, 75 and 70 per cent, designated in accordance with the rare earth product designation standard GB/T 17803.

The chemical composition table also limits the other rare earth impurities, which matter because heavy rare earths and cerium behave differently in the magnet, and the non-rare-earth impurities, which matter because iron, silicon, calcium and chloride carry through into the reduction. Issued on 11 September 2015 and in force since 1 August 2016.

This standard specifies the requirements of praseodymium neodymium oxide, test methods, inspection rules and packaging, labeling, transportation, storage and quality certificate. This standard applies to the rare earth mine and processing more than NdFeB compound extract obtained praseodymium neodymium oxide, praseodymium neodymium-powered solution preparation Metal and glass, ceramics and other additives used.

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 expressed about the rules and limit values 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 Determination of

GB/T 26417 praseodymium neodymium alloy and chemical analysis of rare earth coordination compound component

3 Balance Balance Balance Balance Impurity

Not very La_2O_3 0.05 0.05 0.05

0.05 CeO_2 0.05 0.05 0.05

0.05 Sm_2O_3 0.05 0.05 0.05

0.05 Y_2O_3 0.03 0.03 0.03

0.03 Other rare earth impurities (Combined amount) 0.1 0.1 0.1 0.1