

ICS 77.100
CCS D 32



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

GB/T 21836-2024

Replacing GB/T 21836-2008

Manganous manganic oxide

四氧化三锰

Issued on: April 25, 2024

Implemented on: November 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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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: This document replaces GB/T 21836-2008 "Manganese tetraoxide for soft ferrites": Compared with GB/T 21836-2008, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows:

- a) The scope has been changed (see Chapter 1, Chapter 1 of the:2008 edition);
- b) The classification and code of products have been changed (see Chapter 4, Chapter 3 of the:2008 edition);
- c) The technical requirements for product appearance have been changed (see 5:1, 4:1:1 of the:2008 edition);
- d) The chemical composition has been changed (see 5:2:1, 4:1:2 of the:2008 edition);
- e) The physical properties have been changed (see 5:2:2, 4:1:3 of the:2008 edition);
- f) The inspection items and test methods have been changed (see 6:2, 5:2 of the:2008 edition);
- g) The batching has been changed (see 7:2, 6:2 of the:2008 edition);
- h) Changes have been made to marking, packaging, transportation, storage and quality certificates (see Chapter 8, Chapter 7 of the:2008 edition);
- i) The method for determining manganese content by ammonium ferrous sulfate titration has been changed (see Appendix A, Appendix A of the:2008 edition);
- j) Inductively coupled plasma atomic emission spectrometry (see Appendix B) has been added: 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 by the China Iron and Steel Association: This document is under the jurisdiction of the National Technical Committee for Standardization

of Pig Iron and Ferroalloys (SAC/TC318): This document was drafted by: Sinosteel Tianyuan Co., Ltd.; Hunan Special Metal Materials Co., Ltd.; Guizhou Jinrui New Materials Co., Ltd.; Responsible company, Guizhou Dalong Huicheng New Materials Co., Ltd.; Sichuan Zhongzhe New Materials Technology Co., Ltd.; Xinxiang Zhongtian New Energy Technology Co., Ltd.; Co., Ltd.; Guizhou Best New Energy Materials Co., Ltd.; Inner Mongolia Xintai Industrial Group Co., Ltd.; Jitie Ferroalloy Co., Ltd.; Qingdao Boxinda Technology Co., Ltd.; Hebei Jinxi International Trade Co., Ltd.; National Manganese Industry Technical Committee, Metallurgical Industry Information Standard Research Institute Research Institute: The main drafters of this document are: Yu Jin, Wang Yicun, Liu Jing, Yang Yang, Wu Xiuling, Chen Xiaozhi, Dong Xiongwen, Ding Xiaofeng, Kang Kai, Jin Fei, Peng Tianjian, Liu Qi, Chen Feiyu, Lu Jie, Li Fang, Huang Wenjie, Liu Wuhua, Li Jinglin, Liu Bing, Liu Shiyi, Shen Xiyuan, Zhang Zhaohui, Liu Jingyu, Liu Fei, Ye Xiaoshuang, Zhang Chen and Liu Yanting: Manganese tetraoxide

1 Scope

GB/T 21836-2024 is the Chinese national standard on manganous manganic oxide, in the field of metallurgy. 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 25 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 November 2024. Classification: ICS 77.100, CCS D 32. 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.

7 Determination of sulfur content in ferromanganese, manganese silicon alloys, ferromanganese nitride and metallic manganese - Infrared absorption method and combustion neutralization droplet method Law

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document: For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document: GB/T 1479:

GB/T 5314 Powder sampling method for powder metallurgy GB/T 5686:

GB/T 6284 General method for determination of moisture in chemical products - Loss on drying method

GB/T 9729 General method for determination of chloride in chemical reagents

GB/T 13390 Determination of specific surface area of metal powders - Nitrogen adsorption method

3 Terms and definitions

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

4 Classification and code

1 According to the usage, it is divided into two types: manganese tetraoxide for battery industry and manganese tetraoxide for electronics industry: 4:

2 The code for manganese dioxide used in the battery industry is composed of the first letters of the Chinese pinyin for battery and manganese, "DCM", and the Arabic numeral of the specified grade: The word consists of two parts: The code for manganese tetraoxide used in the electronics industry is composed of the first letters of the Chinese pinyin for "electron" and "manganese" "DZM" and the Arabic numeral of the specified grade: The word consists of two parts: The manganese tetraoxide used in the battery industry is divided into three grades: DCM-1, DCM-2 and DCM-3 according to the content of the main elements: Manganese tetraoxide is divided into three grades: DZM-1, DZM-2 and DZM-3 according to different specific surface areas:

5 Technical requirements

1 Appearance The appearance of the product should be uniform in color, without lumps or inclusions: