

ICS 81.080

CCS Q 40



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

GB/T 18931-2022

Replacing GB/T 18931-2008

**Classification of basic dense shaped refractory products
containing less than 7% residual carbon**

Issued on: October 12, 2022

Implemented on: October 12, 2022

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

foreword

1 Scope

2 Normative references

3 Terms and Definitions

4 categories

4.1 Basis for classification

4.2 Types of products

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 18931-2008 "Classification of Alkaline Dense Shaped Refractory Products with Residual Carbon Content Less than 7%", and GB/T 18931-

Compared with.2008, except for structural adjustment and editorial changes, the main technical changes are as follows.

a) The name and description of the classification basis, product category, grade, raw material characteristics, and post-processing have been changed (see Chapter 4,.2008 edition

3.1~3.4, 3.6);

b) Changed the chemical analysis requirements (see 4.2, 3.2 of the.2008 edition);

c) Changed the description method of naming (see Chapter 5, 3.7 of the.2008 edition).

This document is modified to adopt ISO 10081-2.2003 "Classification of Dense Shaped Refractory Products Part 2. Alkaline with less than 7% carbon residual Products".

A chapter "Terms and Definitions" has been added to this document.

The technical differences between this document and ISO 10081-2.2003 and their reasons are as follows.

--- ISO 12677, GB/T 34332 replaced ISO 10058 with normatively quoted GB/T 21114, and

added specifications

GB/T 18930 (see Chapter 3) and GB/T 4984, GB/T 5069, GB/T 5070, GB/T 16555 (see 4.2) to adapt to the technical conditions of our country and improve operability;

--- Changed the description of inorganic chemical combination [see 4.5c)], and unified with the definition of "inorganic chemical combination" in ISO 10081-1.

The following editorial changes have been made to this document.

--- Incorporate the errata content of ISO 10081-2.2003/Cor.1.2008, and use vertical

Double lines (||) are marked;

---Correct $\text{MgO} \leq 80$ in magnesia-chromium MCr80 in Table 2 to $\text{MgO} \geq 80$.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the classification and designation of alkaline dense shaped refractory products with a carbon content (mass fraction) of less than 7%.

This document applies to alkaline dense shaped refractory products with a carbon content (mass fraction) of less than 7%.

Note. All products can be covered with metal plates, and all unfired products can be reinforced with metal sheets and/or metal fibers.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 4984 Chemical analysis methods for zirconium-containing refractories

GB/T 5069 Chemical analysis methods for magnesium-aluminum series refractory materials

GB/T 5070 Chemical analysis methods for chromium-containing refractory materials

GB/T 16555 Chemical analysis methods for refractory materials containing carbon, silicon carbide and nitride

GB/T 18930 Terminology of refractory materials

GB/T 21114 X-ray fluorescence spectrochemical analysis of refractory materials Cast glass method (GB/T 21114-2019,

ISO 12677.2011, MOD)

GB/T 34332 Chemical analysis methods for magnesite and dolomite refractory products (GB/T 34332-2017, ISO 10058-1.2008,

ISO 10058-2.2008, ISO 10058-3.2008, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 18930 apply to this document.

4.1 Basis for classification

Alkaline dense shaped refractory products with a carbon content of less than 7% should be classified according to the following conditions.

- a) type of product;
- b) The grade, mainly depends on the magnesium oxide content and the presence or absence of antioxidants;
- c) raw material characteristics;
- d) combination form;
- e) Post-processing.

4.2 Types of products

The following general symbols are used to represent the types of products.

- a) Magnesium (M);