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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 46771-2025

Limitation requirements of harmful elements in graphite and fluorite

石墨和萤石中有害元素限量要求

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Table of Contents

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China. Limits on harmful elements in graphite and fluorite

1 Scope

GB 46771-2025 is the Chinese national standard on limitation requirements of harmful elements in graphite and fluorite, in the field of mining and minerals. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 31 October 2025 by the State Administration for Market Regulation; Standardization Administration of China, and takes effect on 1 November 2026. Classification: ICS 73.080, CCS Q69. 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.

This document specifies the limits for harmful elements in graphite and fluorite and describes the corresponding test methods. This document applies to flake graphite products, microcrystalline graphite products, and fluorite powder products.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this

document; for undated references, the latest version (including all amendments) applies. This document. GB/T 3518 Flake Graphite

GB/T 3519 Microcrystalline Graphite

GB/T 3521 Chemical Analysis Methods for Graphite

GB/T 5195.12 Chemical Analysis Methods for Fluorite - Part

12.Determination of Arsenic Content SN/T 3521 Simultaneous Determination of Arsenic and Mercury Content in Imported Coal by Hydride Generation-Atomic Fluorescence Spectrometry

3 Terms and Definitions

The terms and definitions defined in GB/T 3518 and GB/T 3519, as well as the following terms and definitions, apply to this document.

3.1 harmful element Elements that are significantly toxic to humans and significantly pollute the environment. [Source: GB/T 20424-2025, 3.2, with modifications]

3.2 fluorite concentrate Fluorite powder, which is mainly composed of calcium fluoride, is obtained from raw fluorite ore through processes such as beneficiation and mechanical processing.

4 Limits on harmful elements in graphite and fluorite

4.1 Limits on Hazardous Elements in Graphite Graphite is classified into flake graphite and microcrystalline graphite according to the size of its crystal grains. According to GB/T 3518, flake graphite is classified into high-purity flake graphite, high-carbon flake graphite, and medium-carbon flake graphite based on its fixed carbon content. There are four categories. low-carbon flake graphite and low-carbon flake graphite. According to GB/T 3519, microcrystalline graphite is classified into high-purity microcrystalline graphite, high-carbon microcrystalline graphite, and medium-carbon microcrystalline graphite based on its fixed carbon content. There are four categories. low-carbon microcrystalline graphite and low-carbon microcrystalline graphite. The limits for harmful elements in flake graphite should meet the requirements of Table 1, and the limits for harmful elements in microcrystalline graphite should meet the requirements of Table 2.