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

GB/T 10117-2021

Replacing GB/T 10117-2009

High purity antimonium

高纯锑

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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 of Standardization Documents" drafted: This document replaces GB/T 10117-2009 "High Purity Antimony": Compared with GB/T 10117-2009, except for structural adjustments and editorial changes In addition, the main technical changes are as follows:

- a) Changed the scope of application (see Chapter 1, Chapter 1 of the:2009 edition);
- b) Changed the requirements for the impurity elements As, Au, Pb in the chemical composition, and increased the requirements for the impurity content of B, Na, Al, Ca, Ga, Sn (see 5:1, 3:2 of the:2009 edition);
- c) Added the description about the Sb content and the sum of the impurity content (see Table 1);
- d) Changed the requirements for appearance quality (see 5:2, 3:3 of the:2009 edition);
- e) Changed the content of the test method (see Chapter 6, Chapter 4 of the:2009 edition);
- f) Changed the content of inspection and acceptance (see 7:1, 5:1 of the:2009 edition);
- g) The regulations on group approval have been changed (see 7:2, 5:2 of the:2009 edition);
- h) Added the content of inspection items (see 7:3);
- i) The requirements for sampling and sample preparation have been changed (see 7:4, 5:3 of the:2009 edition);
- j) Added the requirements for the rounding off and determination of the chemical composition test results (see 7:5:1);
- k) Changed the determination of the inspection results of appearance quality (see 7:5:3, 5:4 of the:2009 edition);
- l) Changed the content of the logo (see 8:1, 6:2 of the:2009 edition);

m) Delete the requirements for specific packaging specifications (see 6:1:1 of the:2009 edition);

1 Scope

GB/T 10117-2021 is the Chinese national standard on high purity antimonium, 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 31 December 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2022. Classification: ICS 77.150.99, CCS H62. 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 classification, technical requirements, test methods, inspection rules, marking, packaging, transportation, storage, accompanying documents and ordering of high-purity antimony Contents of the manifest: This document is applicable to the production process of chlorination, rectification, hydrogen reduction, vacuum distillation, zone smelting or Czochralski purification using industrial antimony as raw material Preparation of high-purity antimony:

Note: High-purity antimony is mainly used for the preparation of III-V group compound semiconductor materials, high-purity alloys, thermoelectric cooling elements, and as a dopant for silicon and germanium single crystals:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document:

GB/T 8170 Numerical Rounding Rules and Representation and Judgment of Limit Values
YS/T

35 High-purity antimony chemical analysis method Determination of magnesium, zinc, nickel, copper, silver, cadmium, iron, sulfur, arsenic, gold, manganese, lead, bismuth, silicon, selenium content Definite Mass Resolution Glow Discharge Mass Spectrometry

3 Terms and Definitions

There are no terms and definitions that need to be defined in this document:

4 Categories

High-purity antimony is divided into two grades: Sb-05 and Sb-06 according to chemical composition:

5 Technical requirements

1 Chemical composition The chemical composition of high-purity antimony should meet the requirements in Table 1: Table