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

GB/T 1777-2025

Replacing GB/T 1777-2009

Superfine palladium powder

超细钯粉

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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.

This document replaces GB/T 1777-2009 "Ultrafine Palladium Powder". Compared with GB/T 1777-2009, the only changes are structural adjustments and editorial modifications.

In addition, the main technological changes are as follows.

- a) Added terms and definitions for ultrafine palladium powder (see 3.1);
- b) The product classification for ultrafine palladium powder has been expanded, with new grades added. PPd-1.0 and PPd-3.0 (see 4.1);
- c) Product markings for ultrafine palladium powder have been added (see 4.2);
- d) The impurity elements Ru, Mn, Cr, Mg, Zn, and Bi, along with their specified limits, were added to the chemical composition table, and the impurity content in the chemical composition table was modified.

Specified limits for the essential elements Pt, Rh, Ir, Au, Ag, Pb, Al, and Si (see 5.1);

- e) The specific surface area range, loose density range, tapped density range, and particle size distribution (D10) of PPd-1.0 and PPd-3.0 have been increased.

The ranges for D50 and D90 have been changed, as have the ranges for specific surface area, loose density, and tapped density of PPd-6.0 (see 5.2, 2009 edition). 3.3);

- f) Technical requirements and test methods for the moisture content and burn-off rate of ultrafine palladium powder have been added (see 5.2, 6.6, and 6.7);

- g) The sampling method and sampling quantity for the testing of ultrafine palladium powder have been changed (see 7.4, 5.4 in the 2009 edition);

- h) An arbitration sampling method for ultrafine palladium powder has been added (see 7.5);
- i) Added packaging markings for ultrafine palladium powder (see 8.1.2);
- j) The packaging requirements for ultrafine palladium powder have been revised (see 8.2.1, 6.2.1 of the 2009 edition);
- k) The requirement for a quality certificate for ultrafine palladium powder has been removed (see 6.3 in the 2009 edition);
- l) Added requirements for accompanying documentation of ultrafine palladium powder (see 8.3);
- m) The requirement for determining the burn-off rate of ultrafine palladium powder by hydrogen reduction gravimetric method has been added (see Appendix A).

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 by the China Nonferrous Metals Industry Association.

This document is under the jurisdiction of the National Technical Committee on Standardization of Nonferrous Metals (SAC/TC243).

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The release history of this document and the document it replaces is as follows.

- First published as GB 1777-1988 in 1988, revised for the first time in 1995, and revised for the second time in 2009;

- This is the third revision. ultrafine palladium powder

1 Scope

This document specifies the classification and marking, technical requirements, labeling, packaging, transportation, storage, and accompanying documents and purchase orders for ultrafine palladium powder.

The document describes the test methods and inspection rules for ultrafine palladium powder.

This document applies to ultrafine palladium powder used in the electronics industry.

2 Normative references

GB/T 191

GB/T 1420-2015

GB/T 1479.1

GB/T 1774-2009

GB/T 5162

GB/T 8170

GB/T 19077

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 4 Classification and Labeling

Palladium powder with a particle size of micron or submicron in the form of spherical or near-spherical particles.

4.1 Product Classification

Based on the different average particle size (D50), and according to the upper limit of its average particle size (D50), it is divided into three types. PPd-1.0, PPd-3.0, and PPd-6.0. Brand name.

Ultrafine palladium powder product code Pd- Name of ultrafine palladium powder Upper limit of average particle size (D50) of ultrafine palladium powder