

ICS 77.150.99

CCS H 68



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

GB/T 26288-2024

Replacing GB/T 26288-2010

Dichlorodiammine palladium (II)

二氯二氨钯

Issued on: September 29, 2024

Implemented on: April 1, 2025

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

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification and marking	1
4.1 Product classification	1
4.2 Product marking	1
5 Technical requirements	2
5.1 Chemical composition	2
5.2 Solubility	2
5.3 Appearance quality	2
6 Test methods	2
6.1 Chemical composition	2
6.2 Solubility	2
6.3 Appearance quality	3
7 Inspection rules	3
7.1 Checking and acceptance	3
7.2 Batching	3
7.3 Inspection items	3
7.4 Sampling	3
7.5 Judgement of the inspection result	3
8 Marking, packaging, transport, storage and accompanying documents	3
8.1 Marking	3
8.2 Packaging, transport and storage	4
8.3 Accompanying documents	4
9 Content of the order form	4

1 Scope

The document fixes the classification and marking, the technical requirements, the test methods, the inspection rules and the provisions on marking, packaging, transport, storage, accompanying documents and the content of the order form for dichlorodiammine palladium.

It applies to dichlorodiammine palladium used in fine chemicals, in chemical engineering and in the electroplating industry. Clause 3 states that the document defines no terms.

4 Classification and marking

By molecular structure the product is divided into the cis and the trans form, shown in Figure 1.

The product name is dichlorodiammine palladium and the chemical formula is $\text{Pd}(\text{NH}_3)_2\text{Cl}_2$. The cis form is marked as the number of the document followed by the formula and the suffix Cis, and the trans form as the number of the document followed by the formula and the suffix Trans.

5 Technical requirements

The chemical composition shall meet Table 1, which sets a palladium mass fraction of not less than 49.5 % and a mass fraction of not more than 0.001 % for each of the fourteen impurity elements silver, gold, platinum, rhodium, iridium, lead, nickel, copper, iron, tin, chromium, zinc, magnesium and cadmium, with the total impurity content not more than 0.1 %. A footnote states that the total impurity content includes, but is not limited to, the sum of the impurity elements listed in the table.

The cis form shall dissolve completely in deionized water and the trans form completely in dilute ammonia, in both cases giving a clear transparent solution with no insoluble matter visible to the eye.

The cis form shall be a yellow-brown needle-like or columnar crystal and the trans form a yellow powdery crystal.

6 Test methods

The palladium mass fraction is determined in accordance with GB/T 23276, the method in which palladium is precipitated with dimethylglyoxime and titrated with EDTA. The mass fractions of the impurity elements are determined in accordance with YS/T 1197, by inductively coupled plasma atomic emission spectrometry.

For the water solubility test of the cis form, 0.50 g of sample is weighed to 0.0001 g, 100 mL of deionized water is added and the solubility is examined by eye. For the dilute ammonia solubility test of the trans form, 0.50 g of sample is weighed to 0.0001 g and 10 mL of ammonia water and 25 mL of deionized water are added.

The appearance quality is checked by eye.

7 Inspection rules

The product is inspected by the supplier or by a third party and shall meet the document and the order form. The purchaser may inspect the product received against the document; where the result does not agree with the document and the order form, the purchaser raises the matter in writing and the two parties settle it by consultation. An objection on appearance quality is to be raised within 3 d of receipt of the product, and one on chemical composition and solubility within 15 d. Where arbitration is needed, the sample is taken jointly at the purchaser or as the two parties agree.

The product is submitted for acceptance in batches, each batch consisting of product made from one charge of material.

Every batch is inspected for chemical composition, solubility and appearance quality. For the chemical composition and solubility tests the sample is taken at random from the same batch, 1 % to 5 % of the total quantity being taken and then reduced by quartering to the quantity the tests require; the appearance quality is inspected bottle by bottle.

The values of the inspection results are rounded in accordance with GB/T 8170 and judged by the rounded-value comparison method. If the result of any one of the chemical composition and solubility tests fails to comply, the batch is rejected; if the appearance quality fails, that bottle is rejected.

8 Marking, packaging, transport, storage and accompanying documents

Product that has passed inspection carries the supplier name, the product marking, the production batch number, the net weight and the production date. The marking of the packing case shall meet GB/T 191.

The product is packed in polypropylene or polyethylene plastic bottles, tightly sealed, set neatly in a wooden or cardboard case and packed out with paper scraps, foamed plastic or similar soft material so that nothing can shift. It may be carried by rail, road or water, and is to be stored in a dry place and kept from damp.

Each batch carries accompanying documents which, besides the supplier information, the product information, the number of the document and the date of delivery or packing, should include an inspection report giving the inspection items and their results or the inspection conclusion, the batch number, the inspection date and the signature or stamp of the inspector, together with any other item.

9 Content of the order form

The purchaser may list in the order form for the product covered by the document the product name, the specification, the net weight or the number of pieces, the number of the document and any other item required.