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CCS G56



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

GB/T 21892-2015

Replacing GB/T 21892-2008

p-Aminophenol

对氨基苯酚

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1 Scope

GB/T 21892-2015 is the Chinese national standard on p-aminophenol, in the field of paint and colour industries. 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 15 May 2015 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2015. Classification: ICS 87.060.10, CCS G56. 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 Standard specifies the requirements, sampling, test methods, inspection rules, as well as marks, labels, packaging, transportation and storage of p-aminophenol. This Standard applies to the quality control of p-aminophenol products. Structural formula. Molecular formula. $\text{C}_6\text{H}_7\text{NO}$ Relative molecular mass. 109.13 (according to the 2009 International Atomic Mass Standard) CAS RN. 123-30-8

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest

edition of the referenced document (including any amendments) applies.

GB/T 190, Labels for packages of dangerous goods

GB/T 191, Packaging and storage marks

GB/T 601, Chemical reagent -- Preparations of reference titration solutions

GB/T 603, Chemical reagent -- Preparations of reagent solutions for use in test methods

GB/T 2384, Dyes intermediates -- General method for the determination of melting range

GB/T 2386-2014, Dyestuffs and intermediate of dyes -- Determination of moisture content

GB/T 6678-2003, General principles for sampling chemical products

GB/T 6682-2008, Water for analytical laboratory use -- Specification and test methods

GB/T 8170-2008, Rules of rounding off for numerical values and expression and judgement of limiting values

GB 12268-2012, List of dangerous goods

GB 12463, General specifications for transport packages of dangerous goods

GB 15258, General rules for preparation of precautionary label for chemicals

GB 15603, General rules for the hazardous chemicals warehouse storage

3 Requirements

The quality requirements for p-aminophenol shall comply with the requirements in Table 1.

4 Safety information

4.1 Safety According to GB 12268-2012, p-aminophenol is designated as a dangerous good (UN. 2512). It is classified as Class 6.1, a toxic substance. It is flammable when exposed to open flames or high temperatures. It reacts with strong oxidants. It decomposes upon heating, releasing toxic and corrosive gases. Contact with hot surfaces can cause allergic reactions. Ingestion or inhalation of dust can cause death or health damage. Strict safety precautions must be observed during use and handling.

4.2 Safety data sheet According to GB/T 16483, p-aminophenol should be provided with a detailed safety data sheet before leaving the factory. The safety data sheet should include the following.

- a) Provide information on the hazards of the product;
- b) Instructions for safe use;
- c) Transportation and storage requirements;

- d) Protective measures;
- e) Emergency response measures and other safety information.

5 Sampling

Sampling is conducted in batches. Manufacturers consider uniform products to be a batch. The number of samples collected per batch should comply with the requirements of Section 7.6 of GB/T 6678-2003. The packaging of the sampled products must be intact. Avoid the ingress of foreign matter into the product during sampling. Use a probe to collect samples from the upper, middle, and lower sections. The total sample volume should be no less than 500 g. After thoroughly mixing the samples, divide them into two clean, dry, well-sealed containers and label them. Indicate the product name, batch number, manufacturer name, sampling date, and location. Keep one container for inspection and one for future reference.

6 Test methods

6.1 General Unless otherwise specified, only reagents that are confirmed as analytically pure and Grade 3 water as specified in GB/T 6682-2008 are used. Standard titrant solutions, preparations, and products used in the tests, unless otherwise specified, are prepared and calibrated in accordance with GB/T 601 and GB/T 603. Test results are determined using the rounded value comparison method described in

4.3.3 of GB/T 8170-2008.

6.2 Appearance assessment Visual assessment is performed under natural northern daylight.

6.3 Determination of p-aminophenol mass fraction (amino value)

6.3.1 Determination principle Use diazotization method. The mass fraction of p-aminophenol is determined based on the principle that aromatic primary amines react with sodium nitrite to form diazonium salts in a low temperature and excess inorganic acid environment.

6.3.2 Reagents and solutions

6.3.2.1 Hydrochloric acid.

6.3.2.2 Potassium bromide solution. 100 g/L.

6.3.2.3 Sodium nitrite standard titration solution. $c(\text{NaNO}_2) =$

0.1 mol/L; use starch- potassium iodide test paper to determine the endpoint during calibration.

6.3.2.4 Starch-potassium iodide test paper.

6.3.3 Determination steps Weigh approximately

0.25 g~

0.30 g of the specimen (accurate to 0.0001

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