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CHEMICAL INDUSTRY STANDARD OF
THE PEOPLE'S REPUBLIC OF CHINA

ICS 71.100.01; 87.060.10

G 56

Filing number: 48526-2015

HG/T 4715-2014

3,4-Dichloronitrobenzene

3,4-二氯硝基苯

Issued on: December 31, 2014

Implemented on: June 01, 2015

Issued by: Ministry of Industry and Information Technology of PRC

Table of Contents

Foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Requirements.....	5
4 Safety information	5
5 Sampling	6
6 Test method	6
7 Inspection rules.....	9
8 Markings, labels, packaging, transportation and storage	10

3,4-Dichloronitrobenzene

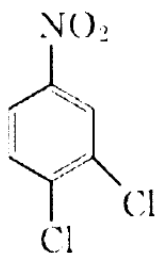
Warning: The personnel using this standard shall have practical experience in formal laboratory work. This standard does not point out all possible safety issues. The user is responsible for taking appropriate safety and health measures and ensuring compliance with the conditions stipulated by relevant national laws and regulations.

1 Scope

This standard specifies the requirements, safety information, sampling, test methods, inspection rules, marking, labels, packaging, transportation and storage for 3,4-Dichloronitrobenzene.

This standard applies to the product quality control of 3,4-Dichloronitrobenzene.

Structural formula:



Molecular formula: $\text{H}_3\text{Cl}_2\text{NO}_2$

Relative molecular mass: 192.00 (according to the 2009 international relative atomic mass)

CAS RN: 99-54-7

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB 190 Packing symbol of dangerous goods

on the skin and mucous membranes. It decomposes by high heat and emits toxic fumes. Strict attention shall be paid to safety when using and handling it.

4.2 Safety technical specification

According to GB/T 16483, the product shall provide detailed safety technical specifications when leaving the factory. The safety technical specification shall include the following contents:

- a) Provide dangerous information of the product;
- b) Safe use method;
- c) Transportation and storage requirements;
- d) Protective measures;
- e) Emergency treatment measures, etc.

5 Sampling

Sampling is based on batches. The production plant uses uniform products as a batch. The number of samples in each batch shall comply with the provisions of 7.6 in GB/T 6678-2003. The packaging of the sampled product must be intact. Do not allow the external impurities to fall into the product during sampling. When sampling, the probe tube is used to take samples including the upper, middle and lower parts; the total sampled product shall not be less than 500 g. After fully mixing the taken samples, divide them into two clean, dry, well-sealed containers; paste labels on them; indicate the product name, product batch number, manufacturer name, sampling date, sampling location. One is for inspection and the other is kept for future reference.

6 Test method

6.1 General provisions

Unless otherwise specified, only use reagents confirmed to be analytically pure. The test result is judged according to the rounding-off value comparison method in 4.3.3 of GB/T 8170-2008.

6.2 Appearance evaluation

Use visual evaluation under natural light.

6.3 Determination of purity of 3,4-dichloronitrobenzene and content of organic impurities

The best operating conditions can be selected according to different equipment.

6.3.5 Measurement procedure

6.3.5.1 Preparation of sample solution

Weigh about 0.5 g (accurate to 0.001 g) of 3,4-Dichloronitrobenzene specimen. Place it in a 10 mL volumetric flask. Add chloroform to dissolve it. Dilute it to the mark. Close the bottle stopper. Place it in the ultrasonic generator for oscillation to fully dissolve it, which is the sample solution.

6.3.5.2 Determination

Turn on the chromatograph. After the various operating conditions of the instrument are stable, add 1.0 μL of the sample solution. Use the chromatographic workstation or integrator to process the results after the peak is completed.

6.3.6 Result calculation

The purity and organic impurity content of 3,4-dichloronitrobenzene is expressed in w_i ; the value is expressed in % and calculated according to formula (1):

$$w_i = \frac{A_i}{\sum A_i} \times 100 \% \quad \dots\dots\dots (1)$$

Where:

A_i - Peak area of 3,4-Dichloronitrobenzene and various organic impurities;

$\sum A_i$ - The sum of the peak areas of 3,4-Dichloronitrobenzene and each organic impurity.

The calculation result is expressed to 2 decimal places.

6.3.7 Allowance

The absolute difference between the two parallel determinations of the purity of 3,4-Dichloronitrobenzene shall be not more than 0.20%. The absolute difference between the two parallel determinations of the content of each organic impurity shall be not more than 0.05%. Take the arithmetic mean value as the determination result.

6.3.8 Chromatogram

The chromatogram is as shown in Figure 1.

inspection items.

7.2 Exit-factory inspection

3,4-Dichloronitrobenzene shall be inspected and qualified by the quality inspection department of the production plant; the qualified certificate shall be attached before leaving the factory. The manufacturer shall ensure that all 3,4-dichloronitrobenzene delivered out of the factory meet the requirements of this standard.

7.3 Reinspection

If one of the indicators in the inspection result does not meet the requirements of this standard, samples shall be taken from twice the amount of packaging for inspection. Even if only one indicator of the reinspection does not meet the requirements of this standard, the entire batch of products will be unqualified.

8 Markings, labels, packaging, transportation and storage

8.1 Markings

3.4- Each package of 3,4-Dichloronitrobenzene shall be painted with firm and clear hazardous chemical signs and related safety storage and transportation signs in accordance with the relevant requirements of GB 190 and GB/T 191. The contents of the signs shall at least include:

- a) Product name;
- b) The name and address of the manufacturer;
- c) Production date;
- d) Production license number (if applicable)
- e) Net content;
- f) Warning signs (toxic substances).

8.2 Label

The product shall have a label. The label shall indicate the date of production, certificate of conformity, implemented standard number, batch number and grade; meanwhile it shall comply with GB 15258 "General rules for preparation of precautionary label for chemicals".

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