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

GB/T 15063-2020

Replacing GB 15063-2009

Compound fertilizer

复合肥料

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1 Scope

GB/T 15063-2020 is the Chinese national standard on compound fertilizer, in the field of agriculture. 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 19 November 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 June 2021. Classification: ICS 65.080, CCS G21. 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 terms and definitions, technical requirements, sampling, test methods, inspection rules, marking and quality certificates, packaging, transportation, storage of compound fertilizers. This standard applies to compound fertilizers (including ternary or binary solid fertilizers, which use nitrogen, phosphorus, potassium as basic nutrients, under various names). This standard does not apply to compound fertilizer products, such as monoammonium phosphate and diammonium phosphate.

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) is applicable to this standard.

GB/T 3597 Fertilizer - Determination of nitrate nitrogen content - Nitron gravimetric method

GB/T 6274 Fertilizers and soil conditioners - Vocabulary

GB/T 6679 General rules for sampling solid chemical products

GB/T 8170 Rules of rounding off for numerical values & expression and judgement of limiting values

GB/T 8569 Packing of solid chemical fertilizers

GB/T 8571 Preparation of laboratory samples for compound fertilizers

GB/T 8572-2010 Determination of total nitrogen content for compound fertilizers titrimetric method after distillation

GB/T 8573 Determination of available phosphorus content for compound fertilizers

GB/T 8574 Determination of potassium content for compound fertilizers - Potassium tetraphenylborate gravimetric method

GB/T 8576 Determination of free water for compound fertilizers - Vacuum oven method

GB/T 8577 Determination of free water for compound fertilizers - Karl Fischer method

3 Terms and definitions

The terms and definitions, as defined in GB/T 6274, as well as the following terms and definitions, apply to this document.

3.1 Compound fertilizer Fertilizers, which are made by chemical methods and/or physical methods, indicating the content of at least two of the three nutrients of nitrogen, phosphorus, potassium.

3.2 Aggregate sample The sample, which is combined from the individual samples of the inspection lot.

Note. For statistical analysis, the aggregate samples can be divided into several samples. for separate subdivision and analysis.

4 Technical requirements

4.1 Appearance Granular, strip or flake products, which have no mechanical impurities.

4.2 Technical indicators The product shall meet the technical indicators in Table

1. At the same time, it shall meet the indicated values on the packaging container.

4.3 Limit requirements for toxic and hazardous substances The biuret content of the products, which are indicated in the packaging container or the instructions for use that, it is suitable for simultaneous sowing of seed fertilizers, shall be $\leq 0.8\%$; the limit requirements of other toxic and harmful substances shall be implemented in accordance with GB 38400.

5.1.1 Bagged products

5.1.1.1 When the total number of bags, for each batch of products, does not exceed 512, it shall determine the number of sampling bags, according to Table

2. When the total number of bags of each batch of products is greater than 512, the minimum number of sampling bags shall be determined, according to the calculation result of formula (1). If there are decimals, it shall be rounded off to an integer.

5.1.2 Bulk products It is carried out, in accordance with the requirements of GB/T 6679.

5.2 Sample reduction Quickly mix the collected aggregate sample uniformly. Use a divider or quartering method, to reduce the sample to about 1 kg. Then divide it into two parts, which are divided into two clean and dry glass or plastic bottles with ground stoppers (the quality inspection department of the manufacturer can use a clean and dry plastic Ziplock bag, to hold the sample). Seal and label it. Indicate the name of the manufacturer, product

name, batch number or production date, sampling date and the name of the sampler. One bottle is used for product inspection; the other bottle is retained for two month, for future reference.

6 Test methods

6.1 General provisions Except for appearance and particle size, make parallel determinations of two sets of samples. The reagents, solutions, water, which is used in this standard, shall comply with the provisions of HG/T 2843, when the specifications and preparation methods are not specified.

6.2 Visual inspection Use the sample in 5.2, to make inspection visually.

6.3.1 Determination of total nitrogen content

6.3.2 Determination of available phosphorus content and calculation of the percentage of water-soluble phosphorus in available phosphorus

6.3.2.1 Method

1.Quinoline phosphomolybdate gravimetric method (Arbitration method) It is carried out, in accordance with Appendix A.

6.3.2.2 Method

2.Quinoline phosphomolybdate gravimetric method or plasma emission spectrometry It is carried out, in accordance with GB/T 8573.

6.3.2.3 Method

3Automatic analyzer method After the specimen is prepared, according to the provisions of GB/T 8571 (if the sample is difficult to pulverize, it can be ground, until it passes through a 1.00 mm aperture test sieve). It is determined according to GB/T 22923.

6.3.3 Determination of potassium content

6.3.4 Calculation of total nutrients Total nutrients are the sum of total nitrogen, available phosphorus, potassium content.

6.4.1 Method

1.Nitrogen reagent gravimetric method (arbitration method) After the specimen is prepared, according to the provisions of GB/T 8571 (if the sample is difficult to pulverize, it can be ground, until it passes through a 1.00 mm aperture test sieve). Then it is determined, according to GB/T 3597.