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HG

**CHEMICAL INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

HG/T 5515-2019

**Monoammonium phosphate and diammonium phosphate
containing alginic acid**

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(English Translation)

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Foreword

SAC/TC 105/SC 3 is in charge of the English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This standard was drafted in accordance with the rules of GB/T 1.1-2009.

1 Scope

This standard specifies the terms and definitions, requirements, test methods, inspection rules, marks, packaging, transport and storage of the monoammonium phosphate and diammonium phosphate containing alginic acid.

This standard is applicable to the monoammonium phosphate and diammonium phosphate containing alginic acid prepared by adding seaweed liquid or seaweed powder extracted from seaweed as main raw material during monoammonium phosphate and diammonium phosphate production process.

2 Normative References

The following files are indispensable to the application of this file. For reference documents with specified dates, only the version of the specified date applies to this document. For reference documents without a specified date, their latest versions (including all revisions) apply to this document.

GB/T 6679 General rules for sampling of solid chemical products

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

GB/T 8569 Packaging of solid chemical fertilizers

GB/T 10205 Monoammonium phosphate and diammonium phosphate

GB/T 10209.1 Determination of monoammonium phosphate and diammonium phosphate-Part 1: Total nitrogen content

GB/T 10209.2 Determination of monoammonium phosphate and diammonium phosphate-Part 2: Phosphorus content

GB/T 10209.3 Determination of monoammonium phosphate and diammonium phosphate-Part 3: Water content with ant

GB/T 10209.4 Determination of monoammonium phosphate and diammonium phosphate-Part 4: Particle size

GB 18382 Fertilizer Marking-Presentation and declaration

HG/T 2843 Chemical Fertilizer Products-Standard volumetric, standard, reagent and indicator solutions for chemical analysis

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Alginic acid

a polysaccharide that is formed by a linear polymerization of monouronic acid, which is a block copolymer formed by 1,4 glycosidic bonds using monomers of beta-1,4-

3.2 Monoammonium phosphate and diammonium phosphate containing alginic acid

products with a function of lowering a phosphorus fixation rate are prepared by adding seaweed liquid or seaweed powder prepared after extraction with seaweed as a main raw material into monoammonium phosphate and diammonium phosphate production processes

3.3 Fixation variance rate of water-soluble phosphorus

the water-soluble phosphorus in the monoammonium phosphate and diammonium phosphate reacts with calcium ions to form a precipitate. By measuring the remaining water-soluble phosphorus, a water-soluble phosphorus fixation rate of the monoammonium phosphate or diammonium phosphate (a ratio of the water-soluble phosphorus fixed by the calcium ions to total water-soluble phosphorus) and a water-soluble phosphorus fixation

rate of the monoammonium phosphate or diammonium phosphate containing alginic acid are calculated, and a ratio of a difference between the two water-soluble phosphorus fixation rates to the former water-soluble phosphorus fixation rate is calculated

4.1 Appearance

The products are brown granular or powdery and free of mechanical impurities.

4.2 Technical Indicators

Monoammonium phosphate and diammonium phosphate containing alginic acid shall meet the requirements of Table 1.

5 Test Methods

5.4

Determination of Available Phosphorus and Calculation of Percentage of Water-Soluble Phosphorus in Available Phosphorus In accordance with GB/T 10209.2.

5.1 General Regulation

Unless otherwise specified, the water used in this standard shall be in accordance with HG/T 2843; reagents used in this standard refer to analytical reagents when other requirements are not specified. Standard volumetric solutions, standard solutions preparations, reagent solutions and indicator solutions used in this standard shall be prepared in accordance with HG/T 2843 when a preparation method is not specified.

5.2 Appearance

Visual observation.

5.3 Total Nitrogen Content

In accordance with GB/T 10209.1.

5.5 Alginic Acid

In accordance with Appendix A.

5.6 Fixation Variance Rate of Water-Soluble phosphorus

In accordance with Appendix B.

5.7 Determination of Water Content

In accordance with GB/T 10209.3.

5.8 Particle Size

In accordance with GB/T 10209.4.

6.1 Inspection Categorization and Inspection Items

Product inspection includes ex-factory inspection and type inspection. Except for the fixation variance rate of water-soluble phosphorus, other items in Chapter 4 belong to ex-factory inspection. Type inspection items, including all the items in Chapter 4, shall be conducted:

- A new product design finalization and batch pilot production finalization need to be appraised.
- After normal production, structures, raw materials or production processes change significantly, and product quality indicators may be affected;
- During normal production, type inspection should be carried out periodically and at least once every 6 months;
- Production resumes after suspension for a long time;
- When product quality supervision agencies put forward a request for type inspection.

6.2 Batching

Products are inspected in batches. An output of one shift or one day is considered to be one batch. The maximum batch is 1,000 t.

6.3.1 Bagged products

When there are no more than 512 bags, determine the minimum number of sampling bags according to Table 2; when more than 512 bags, determine the minimum number of sampling bags according to a calculation result of the formula (1), and if encounters a decimal, it is rounded up.

According to the calculation result of Table 2 or formula (1), randomly select the number of sampling bags, insert a sampler from the longest diagonal of each bag to a 3/4 position of the bag to take more than or equal to 100 g of a sample and the sample amount for each batch shall be more than or equal to 2 kg.