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

GB/T 9983-2026

Replacing GB/T 9983-2004

Industrial sodium tripolyphosphate

工业三聚磷酸钠

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 9983-2004 "Industrial Sodium Tripolyphosphate". Compared with GB/T 9983-2004, the only changes are structural adjustments and editing. Aside from the gender changes, the main technical changes are as follows:

---Total nitrogen has been added as an indicator (see 5.2);

---The specifications for premium-grade sodium tripolyphosphate have been changed (see 5.2, Chapter 4 of the 2004 edition);

---A total nitrogen test method has been added (see 6.8);

---Sampling has been modified (see 7.2.2,

6.2.2 from the 2004 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China National Light Industry Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Surfactants and Detergents (SAC/TC272). This document was drafted by: Langfang Natural Resources Comprehensive Survey Center of China Geological Survey and China Daily Chemical Research Institute Co., Ltd. China Light Industry Inspection and Certification (Taiyuan) Co., Ltd., Jiangsu Chengxing Phosphorus Chemical Co., Ltd., and Hubei Xingfa Chemical Group Co., Ltd. The main drafters of this document are: Wu Jie, Yin Fei, Jiang Haibing, Zhang Shuji, Deng Hua, Yao Chenzhi, Li Xiaohui, Xue Dong, Xiang

Yuanping, Feng Liang, and Wang Rui. Man Yukai, Liu Hao, Gao Qiyue. The release history of this document and the document it replaces is as follows:

---First published in 1988, first revised in 2004;

---This is the second revision. Industrial sodium tripolyphosphate

1.Scope This document specifies the product classification, properties, and physicochemical requirements for industrial sodium tripolyphosphate, describes the corresponding test methods, and specifies... Inspection rules, marking, packaging, transportation, storage and shelf life. This document applies to additives used in the synthesis of detergents and in the petroleum, metallurgy, drilling, and building materials industries, manufactured using thermal or wet-process phosphoric acid as raw materials. Industrial sodium tripolyphosphate used in industries such as mining and water treatment.

3.Terms and Definitions This document does not contain any terms or definitions that need to be defined.

4 Product Categories

4.1 Product molecular formula and relative molecular mass Molecular formula. $\text{Na}_5\text{P}_3\text{O}_{10}$. Relative molecular mass. 367.86.

4.2 Product Specifications and Codes Industrial sodium tripolyphosphate is classified into the following specifications according to different apparent densities and type I content, and is indicated by codes, which shall conform to the provisions of Table 1.

4.3 Tag Example Industrial sodium tripolyphosphate with an apparent density of

0.35 g/cm³ to

0.50 g/cm³ and a type I content of 5% to 20% is labeled as. Industrial sodium tripolyphosphate (LA)

5 Requirements

5.1 Characteristics White granules or powdery solids.

5.2 Physicochemical Indicators Industrial sodium tripolyphosphate is classified into superior, first-class, and qualified grades according to product quality. The physicochemical properties of industrial sodium tripolyphosphate products should meet the following requirements. According to the provisions of Table 2.

6 Test Methods

6.1 Apparent density Proceed according to GB/T 9984.

6.2 Type I content Proceed according to GB/T 9984.

6.3 Whiteness The arbitration shall be conducted in accordance with GB/T 9984, with W10 value used for arbitration.

6.4 Total phosphorus pentoxide content Proceed according to GB/T 9984.

6.5 Sodium tripolyphosphate content Proceed according to GB/T 9984.

6.6 Water-insoluble matter content Proceed according to GB/T 9984.

6.7 Iron content Proceed according to GB/T 9984.

6.8 Total Nitrogen Proceed according to GB/T 609.

6.9 pH Proceed according to GB/T 9984.

6.10 Particle size Proceed according to GB/T 9984.

7.1 Inspection Classification

7.1.1 Factory Inspection The factory inspection items include all the items specified in Chapter 5 except for iron content, water-insoluble matter, and total nitrogen (calculated as nitrogen).

7.1.2 Type Testing Type testing includes apparent density, Type I content, and all items specified in Chapter

5. Type testing shall be performed in the following circumstances.

- a) During normal production, type testing should be conducted periodically, generally once a month;
- b) Changes or abnormalities in production processes, equipment, raw materials, and procedures, as well as changes in production management elements (including personnel qualifications, equipment modifications, etc.). When changes in manufacturing processes may affect product quality and performance;
- c) When production resumes after a long period of shutdown;
- d) When the factory inspection results differ significantly from the previous type inspection results;
- e) When market supervision and management agencies and users request type testing.

7.2 Batching and Sampling Rules

7.2.1 Batching Products are grouped into a single delivery batch consisting of products of the same type, specification, and batch number. Products must be inspected and approved by the manufacturer's quality control department according to... Only products that pass the

testing methods specified in this document and are issued a quality certificate may leave the factory. The product quality inspection certificate should include the production details. Manufacturer name, product name, trademark, document number, batch number, batch size, quality indicators, production date, etc. The receiving party shall inspect the goods upon presentation of the product quality inspection certificate. If necessary, sampling and inspection may be conducted within one month in accordance with the following provisions as specified in 7.2.2.

7.2.2 Sampling The number of samples required for acceptance and inspection by the receiving party should be determined based on the batch size. Both parties should meet at the delivery location to collect samples from the delivered batch. Randomly select bags for sampling. According to GB/T 6678, when the total number of bags in each batch does not exceed 512, determine the number of sampling bags according to Table 3; for each batch... When the total number of product bags is greater than 512, the minimum number of sampling bags shall be determined according to the calculation result of formula (1). If the result is a decimal, it shall be rounded up to the nearest integer.

7.3 Judgment Rules The test results shall be determined according to the rounding value comparison method of GB/T 8170 to determine whether the product is qualified or unqualified. If one or more indicators do not meet the requirements of this document, the product shall be deemed qualified. According to the regulations, double the sampling should be taken from the delivered batch, and the non-conforming items should be retested. If the retest results meet the requirements of this document, the batch shall be deemed to be defective. If the product is qualified, then the batch of products is deemed unqualified.

8.1 Marking

8.1.1 The packaging shall bear the following markings.

- a) Product name, trademark, and applicable standard number;
- b) Production batch number or production date;
- d) It has markings or labels indicating that it is waterproof or moisture-proof;
- e) Producer's name, address, etc.

8.1.2 The printed marks (patterns and text) on the packaging should be clear, aesthetically pleasing, and free from fading.

8.2 Packaging Packaging should be done in woven plastic bags lined with polyethylene film, and the net content of the package should conform to the nominal weight.

8.3 Transportation During transportation, it should be protected from sunlight, rain, and moisture. Handle with care to avoid damage to the packaging bags.