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

GB/T 8766-2013

Lithium hydroxide monohydrate

单水氢氧化锂

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009. This Standard replaces GB/T 8766-2002 "Lithium hydroxide monohydrate". Compared with GB/T 8766-2002, the main technical changes of this Standard are as follows: - ADD the lithium hydroxide monohydrate produced from brine in the scope; - REDUCE the content of Na + K impurity element in LiOH - H₂O-1 and LiOH - H₂O-2 products; - REDUCE the content of impurity elements such as hydrochloric acid insoluble matters and water insoluble matters in the product; - CHANGE the net weight of each bag of 25 kg ± 25 g TO the net weight of each bag of 20 kg ~ 1000 kg; - INCREASE the content of chloride ion impurity element in the product. This Standard shall be under the jurisdiction of National Technical Committee on Nonferrous Metals of Standardization Administration of China (SAC/TC 243). Drafting organizations of this Standard. Xinjiang Haoxin Lithium Salts Development Co., Ltd., Jiangxi Ganfeng Lithium Industry Co., Ltd., Sichuan Tianqi Lithium Industry Co., Ltd., Sichuan Ni & Co Guorun New Materials Co., Ltd., Haimen Ronghui General Lithium Industry Co., Ltd., Baiyin Zabuye Lithium Industry Co., Ltd., Shaanxi Guoneng Lithium Industry Co., Ltd. Main drafters of this Standard. Chen Yuedi, Yan Chunli, Xie Shaozhong, Jin Peng, Yan Xianwei, Li Nanping, Peng Qiu Hua, Gong Zhixing, Li Niansheng, Mo Zixuan. The previous released versions replaced by this Standard are as follows: - GB/T 8766-1988, GB/T 8766-2002. Lithium hydroxide monohydrate

1 Scope

China's national standard for lithium hydroxide monohydrate. Lithium hydroxide has become one of the most consequential industrial chemicals of the decade, because it is the lithium source used to make the nickel-rich cathode materials that give an electric vehicle battery its range - lithium carbonate cannot be used for those, as it requires a higher calcining temperature than the cathode structure survives. So the shift of the battery industry towards high-nickel chemistry converted lithium hydroxide from a specialty into a bulk commodity, and China refines most of the world's supply. Battery-grade purity is what the specification is really about, and the limits that matter are on sodium, potassium, calcium, iron and magnesium at parts-per-million levels, because these carry through the cathode into the cell and shorten its life. The standard specifies the requirements, test methods, inspection rules, marking, packaging, transport, storage, quality certificate and contract contents, and applies to lithium hydroxide monohydrate produced from lithium ore or from brine.

This Standard specifies the requirements, test methods, inspection rules, marking, packaging, transportation, storage and quality certificate and contract (or order) content of lithium hydroxide monohydrate. This Standard applies to lithium hydroxide monohydrate products produced from lithium ore or brine.

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 190 Packing symbol of dangerous goods

GB/T 191 Packaging - Pictorial marking for handling of goods

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

GB/T 11064 (all parts) Methods for chemical analysis of lithium carbonate, lithium hydroxide monohydrate and lithium chloride

3 Requirements

3.1 Product classification Lithium hydroxide monohydrate products are divided into four grades according to the chemical composition. LiOH - H₂O-T1, LiOH - H₂O-T2, LiOH - H₂O-1, LiOH - H₂O-2.

3.3 Appearance quality The product is white crystalline particles with fluidity and no visible inclusions.

4 Test methods

4.1 The chemical composition inspection of products shall be carried out in accordance with the provisions of GB/T 11064.

4.2 The appearance quality inspection of products shall be carried out by visual inspection.

5.1 Inspection and acceptance

5.1.1 The product shall be inspected by the supply party's quality supervision department to ensure that the product complies with the provisions of this Standard (or the order contract), and it shall fill in the product quality certificate.

5.2 Batching Lithium hydroxide monohydrate products shall be submitted for acceptance in Chemical composition (mass fraction)/%

5.3 Inspection items Each batch of products shall be inspected for chemical composition and appearance quality. The quality consistency inspection items for each batch of products shall comply with the requirements of Table 2.

5.4.1 Sampling quantity Sampling according to the provisions of

7.6 in GB/T 6678-2003.

5.4.2 Sampling method USE a stainless steel tube or a rigid polyvinyl chloride sampler. INSERT the sampling tube into 2/3 of the bag along the center of the bag. The sample taken is mixed and divided into about 200 g by the quartering method.

5.5 Determination of inspection results

5.5.1 If the chemical composition inspection result of the product is unqualified, take double amount of the sample from the same batch of products, and inspect the unqualified item again.

6 Marking, packaging, transportation, storage and quality certificate

6.1 Marking The product packaging bag shall be marked with.

6.2 Packaging The products are packaged by means of inner plastic bag plus outer plastic woven bag. The net weight of each bag is 20 kg ~ 1000 kg.

6.3 Transportation When handling the products, it shall prevent the packaging bag from being damaged and be protected from moisture.

6.4 Storage The products shall be stored in a dry, acid-free environment. The storage period shall not exceed six months.

6.5 Quality certificate Each batch of products shall be accompanied by a quality certificate, indicating.

7 Contract (or order) content

The contract (or order) of the products listed in this Standard shall include the following.

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