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NONFERROUS INDUSTRY STANDARD

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YS/T 546-2021

Replacing YS/T 546-2008

High purity lithium carbonate

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces YS/T 546-2008 "High purity lithium carbonate". Compared with YS/T 546-2008, in addition to the structural adjustments and editorial modifications, the main technical changes in this document are as follows:

a) In the scope of application, add high purity lithium carbonate produced using lithium carbonate as raw material (see Chapter 1 of this Edition). Delete product use (see Chapter 1 of Edition 2008);

b) Delete designation Li_2CO_3-045 (see 3.1, 3.2 of Edition 2008). Add designation Li_2CO_3-03 (see Chapter 4 of this Edition);

c) Delete F^- in Li_2CO_3-04 (see 3.2 of Edition 2008). Add SO_4^{2-} and Cl^- in Li_2CO_3-04 and the main content calculation methods (see 5.1 of this Edition);

d) Add particle size test sample size (see 6.2 of this Edition);

e) Change the product batching (see 7.2 of this Edition; 5.2 of Edition 2008).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

This document was proposed by and shall be under the jurisdiction of National Technical Committee on Nonferrous Metals of Standardization Administration of China (SAC/TC 243).

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Versions of standard substituted by this document are:

High purity lithium carbonate

1 Scope

This document specifies the classification, technical requirements, test methods, inspection rules, marking, packaging, transportation, storage, accompanying documents and order sheet content of high purity lithium carbonate.

This document applies to high purity lithium carbonate produced by carbonate or carbon dioxide precipitation methods using refined lithium hydroxide monohydrate as raw material. It is also suitable for high purity lithium carbonate produced by using lithium carbonate as raw material and using thermal decomposition process after hydrogenation.

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/T 191, *Packaging -- Pictorial marking for handling of goods*

3 Terms and definitions

There are no terms or definitions to be defined in this document.

4 Product classification

High purity lithium carbonate is divided into three designations according to its chemical composition: Li_2CO_3-05, Li_2CO_3-04, and Li_2CO_3-03.

5 Technical requirements

5.1 Chemical composition

The chemical composition of the product shall comply with the requirements in Table 1.

Table 1 -- Product chemical composition

g of samples are considered qualified if they pass.

6.3 Appearance quality is visually inspected.

7 Inspection rules

7.1 Inspection and acceptance

7.1.1 Products are inspected by the supplier or a third party to ensure that product quality complies with the provisions of this document and the order sheet.

7.1.2 The purchaser may inspect the received products in accordance with the provisions of this document. If the inspection results are inconsistent with the provisions of this document and the order sheet, it shall be submitted to the supplier in writing and the problem shall be resolved through negotiation between the supplier and the purchaser. Objections related to appearance quality shall be raised within 10 days from the date of receipt of the product. Objections regarding chemical ingredients shall be raised within 30 days from the date of receipt of the product. If arbitration is required, it shall be determined by joint sampling or negotiation between the supplier and the purchaser on the purchaser's.

7.2 Batching

Products shall be submitted for acceptance in batches. Each batch shall consist of the same designation of mixing materials. The weight of each batch shall not exceed 5000 kg.

7.3 Sampling

7.3.1 Take any 1 piece when it is within 10 pieces. Take any 2 pieces when it is between 10 pieces to 20 pieces. Choose any 4 pieces when it is more than 20 pieces.

7.3.2 Use a stainless-steel sampling tube to sample the material from the 1/2 depth of the packaging bag from the mouth of each packaging bag. The three sampling points are evenly distributed.

7.3.3 The sampling volume shall not be less than 1000 g. After well mixing, use quartering method to divide into the required amount of specimen.

7.4 Inspection result judgment

7.4.1 When the chemical composition test results of a product are unqualified, double samples will be taken from the same batch of products and reinspection will be conducted on the unqualified items. If there is still one unqualified inspection result, the batch of products will be deemed unqualified.

7.4.2 When the product particle size test results are unqualified, double samples will be

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