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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 39687-2020

Testing method for drying loss of fine ceramic powders

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009:

This standard uses the redrafting method to amend and adopt ISO 17860:2014 "Fine Ceramics (Advanced Ceramics, Advanced Technical Ceramics) Ceramic Micro

Determination of loss on drying of grains":

Compared with ISO 17860:2014, this standard has many structural adjustments: Appendix A lists this standard and ISO 17860:2014

The chapter number comparison list:

Compared with ISO 17860:2014, this standard has technical differences, and the clauses involved in these differences have been

The set vertical single line (|) is marked, and a list of the corresponding technical differences and their reasons is given in Appendix B:

This standard also made the following editorial changes:

---The standard name was revised to: "Test Method for Drying Loss of Fine Ceramic Powder";

---Informative Appendix A and Appendix B have been added:

This standard was proposed by the China Building Materials Federation:

This standard is under the jurisdiction of the National Industrial Ceramics Standardization Technical Committee (SAC/TC194):

Drafting organizations of this standard: Shandong Industrial Ceramics Research and Design Institute Co:, Ltd:, Shenzhen Shenzhongyuan Technology Co:, Ltd:, China Building Materials Inspection

Certification Group Zibo Co:, Ltd:

1 Scope

This standard specifies the principle, test equipment, sample preparation, test procedures, and results of the drying loss test method for granular fine ceramic powder

Calculation, arbitration test method and test report:

This standard is applicable to the determination of the drying loss of granular fine ceramic powder, and the determination of the drying loss of other inorganic non-metallic powders:

Can refer to implementation:

2 Principle

The granular ceramic powder may contain water, flux, organic additives and other volatile substances: After drying at high temperature, the water and melt in the powder

Agents and organic additives are removed from the granular powder to a certain extent, resulting in a certain quality loss after drying under certain conditions: powder

The mass loss of the powder is divided by the initial mass of the powder before drying, and the percentage obtained is the drying loss of the powder:

3 Test device

3:1 Oven

The accuracy is +/-5°C:

3:2 Flat chassis

Made of metal (such as tin or aluminum) with good thermal conductivity, with a diameter of about 50mm and a height of 30mm:

3:3 Balance

The range is not less than 10g, and the accuracy is 0:001g:

3:4 Dryer

A dryer equipped with desiccant (such as silica gel, anhydrous calcium chloride):

3:5 Moisture Analyzer

The accuracy is 0:001g, with halogen or infrared heating source:

4 Sample preparation

4:1 When sampling, a sampler should be used or an equivalent method should be used to select representative samples from three different locations:

4:2 The sample should be tested in the initial state, if the sample is pretreated, it should be recorded in the report:

5 Test procedure

5:1 Oven method

5:1:1 Set the oven temperature to 110°C, put the empty flat bottom plate into the oven for drying, and the drying time is not less than 2h, then take it out and place it in a dry