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

GB/T 24265-2014

Replacing GB 24265-2009

Diatomite filter aid for industrial use

工业用硅藻土助滤剂

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Table of Contents

1	Scope
2	Normative references
3	Terms and definitions
4	Classification and marking
4.1	Classification
5	Requirements
6	Test methods
6.1	Inspection of microstructure
6.2	Determination of permeability
6.2.2	Test procedures
6.4	Determination of water soluble
7	Inspection rules
7.1	Inspection classification
8	Marks
9	Package, transport and storage
9.2	Transport and storage

Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009. This Standard replaces GB 24265-2009 "Diatomite filter aids". Compared with GB 24265-2009, the main technical changes are as follows: - Modified the property of standard from "mandatory" to "recommendatory", the name from "Diatomite filter aids" to "Diatomite filter aid for industrial"; - Modified "baked diatomite" to "calcined diatomite"; representation symbol was modified from "BS" to "DS" as well (refer to 3.2,

3.3 of this Edition;

3.3 of 2009 Edition); - Models were merged and modified from 15 to 3 (refer to

4.1.2 of this Edition;

4.1.2 of 2009 Edition); - Modified marking mode (refer to

4.2 of this Edition;

4.2 of 2009 Edition); - Deleted quality requirements for diatomite filter for food and medicine as well as corresponding test methods (refer to

5.1 of 2009 Edition); - Deleted provisions on appearance color; made appropriate modification on requirements for microstructure (refer to Table 2 and Table 3 of 2009 Edition); - Modified requirements for moisture indicator from " $\leq 0.5\%$ " to " $\leq 3.0\%$ " (refer to Table 2 and Table 3 of 2009 Edition); - Modified requirements for water soluble indicator from " $\leq 0.5\%$ " to " $\leq 0.8\%$ " (refer to Table 2 and Table 3 of 2009 Edition); - Modified requirements for silicon oxide from " $\geq 85\%$, $\geq 82\%$, $\geq 80\%$ " to " $\geq 85\%$, $\geq 80\%$, $\geq 75\%$ " respectively (refer to Table 2 and Table 3 of 2009 Edition); - Deleted indicator requirements for ferric oxide, aluminum oxide, calcium oxide, and magnesium oxide; it was modified as "Other chemical components shall be determined by the seller and the buyer after negotiation" (refer to Table 2 and Table 3 of 2009 Edition); - Made appropriate modification on inspection method for microstructure (refer to

6.1 of this Edition;

6.1 of 2009 Edition); - Refined requirements for permeability measuring device (refer to

6.2.1 of this Edition;

6.2.1 of 2009 Edition); - Modified determination method of water soluble from "referring to standards" to "being specifically given" (refer to

6.4 of this Edition;

6.4 of 2009 Edition); - Modified determination method of pH value from referring to "GB 14936" to "JC/T 414" (refer to

1 Scope

China's national product standard for industrial diatomite filter aid. It specifies the classification, the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of diatomite filter aids. Diatomite is the fossil remains of diatoms - microscopic algae with silica skeletons of intricate and highly porous structure - and a filter aid made from it works by a mechanism that ordinary filtration does not use. A liquid carrying fine, compressible or gelatinous solids blinds a filter medium almost immediately: the solids form a dense impermeable layer and flow stops. Diatomite prevents that. Precoated onto the medium and dosed into the liquid, its irregular porous particles build a cake that is itself the filter, with a porosity so high and a structure so rigid that the cake stays permeable as it grows and the captured solids are distributed through its depth rather than at its face. That is how beer, wine, juice, sugar syrup, edible oil, swimming pool water and industrial chemicals are clarified. The grades differ in permeability, and the choice is a trade the user makes: a coarse grade flows fast and lets fine particles through, a fine grade gives brilliant clarity and blocks quickly. So the standard classifies by permeability and specifies the properties that determine performance - the permeability itself, the wet density, the particle size distribution, the moisture, the pH and the soluble content, the loss on ignition, and the acid-soluble iron and other extractables that would

contaminate the filtrate. Crystalline silica is addressed because calcined diatomite contains cristobalite, which is a respiratory hazard. Issued on 24 June 2014 and in force since 1 February 2015, it replaces GB 24265-2009.

This Standard specifies terms and definitions, classification and marking, requirements, test methods, inspection rules, marks, package, transport and storage of diatomite filter aid for industrial. This Standard is applicable to diatomite filter aid for industrial of which the main raw material is diatomite and is made by calcination or flux calcination.

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. JC/T 414 Diatomite

3 Terms and definitions

The following terms and definitions apply to this Standard.

3.1 Permeability The volume of filtrate per filter cake thickness of per filter area at per unit time when filtrate viscosity is 1 cP and filtration layer pressure is 101325 Pa.

3.2 Calcined diatomite The product that is made of diatomite by calcination at 650°C ~ 1000°C, grinding and classification.

4.1 Classification

4.1.1 Diatomite filter aid for industrial is classified into calcined diatomite filter aid (represented by DS) and flux calcined diatomite filter aid (represented by ZDS), according to processing method.

4.2 Marking The marking of diatomite filter aid for industrial is written according to product name, standard number, calcination mode, model, and grade order.

5 Requirements

Physical and chemical indicators of diatomite filter aid for industrial shall comply with the provisions in Table 2.

6.2 Determination of permeability

6.2.1 Apparatus Requirements are as follows:

6.2.2 Test procedures

6.3 Determination of moisture Conduct according to JC/T 414.

6.4 Determination of water soluble

6.5 Determination of pH value Conduct according to JC/T 414.

6.6 Determination of tap density Conduct according to JC/T 414.

6.7 Determination of silicon oxide Conduct according to JC/T 414.

7.1 Inspection classification

7.1.1 Factory inspection Factory inspection items are permeability, moisture and tap density.

7.2 Batching principle Every 500 t of diatomite filter aid for industrial of same category, same grade and in continuous production shall be one batch. If it were less than 500 t, it shall be regarded as one batch.

7.3 Sampling method Regard bag as sampling unit. Use equidistant sampling. take one bag from every $n-1$ bag ($n=N/20$; N is the total number of bags of this batch of products, n takes integer).

7.4 Sample storage After completely mixing, the collected sample shall be divided into two portions by coning and quartering. Respectively place them into clean and dry wide-mouth jars.

7.5 Determination rules When all quality indicators of product comply with requirements in Clause 5, this batch of products shall be determined as qualified. If one or more than one quality indicator failed for the requirements in Clause 5, it shall re-conduct sampling and inspection for the unqualified item. When results of re-inspection all meet requirements in Clause 5, this batch of products shall be determined as qualified; otherwise it shall be unqualified.

8 Marks

8.1 Product identification, net mass, manufacturer's name and address, marks of rainproof, moisture proof and sun block shall be indicated on outer package of diatomite filter aid for industrial.

9 Package, transport and storage

9.1 Package Diatomite filter aid for industrial shall be packaged in bags. Packaging bag is attached with backing film, topical bag or kraft paper bag. Exhaust air before package sealing.