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

GB/T 2481.2-2020

**Bonded abrasives - Determination and designation of grain size
distribution - Part 2: Microgrits**

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Foreword

GB/T 2481 "Inspection and Marking of Abrasive Particle Size Composition for Consolidated Abrasives" is divided into the following two parts.

--- Part 1. Coarse abrasive particles F4 ~ F220;

--- Part 2. Micronized powder.

This part is Part 2 of GB/T 2481.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 2481.2-2009 "Determination and marking of the particle size composition of abrasives for consolidated abrasives Part 2. Fine powder"

Compared with GB/T 2481.2-2009, except for editorial changes, the main technical changes are as follows.

--- Modified the definition of micropowder (see Chapter 3, Chapter 3 of the 2009 edition);

--- Modify the "photoelectrode settlement method" in the detection method to "X-ray gravity settlement method" (see 6.1, 6.2 of 2009 edition);

--- Added the content of the particle size composition of the F series fine powder by the resistance method (see 6.2.7.1);

--- Revised the relevant content of the settlement tube method test (see 6.3, 6.3 in 2009 edition).

This section uses the redrafting method to modify the ISO 8486-2:2007 "Testing and marking of the abrasive particle size composition for consolidated abrasives.

Part 2. Fine powder F230 ~ F2000 ".

Compared with ISO 8486-2..2007, this part has more structural adjustments. Appendix A lists this part and ISO 8486-2..2007

The chapter number comparison table.

The technical differences between this part and ISO 8486-2..2007 and the reasons are as follows.

--- With regard to normative quotation documents, this part has been adjusted with technical differences to adapt to China's technical conditions and adjustments

The situation is reflected in Chapter 2 "Regulatory Reference Documents", with specific adjustments as follows.

* Deleted ISO 8486-1;

* Added reference to GB/T 4676;

* Added reference to GB/T 16458;

--- Modify the definition of micro powder to improve its content, and consistent with China's standard system;

--- Added the content of J240 ~ J8000 fine powder for precision grinding to meet the actual production and application needs of China;

--- Deleted the calculation content of 4.2 in ISO 8486-2..2007, because it only applies to the particle size series in Table 1, but not to

Other particle size series;

--- Deleted the principle content of the X-ray gravity sedimentation method detection in ISO 8486-2..2007, because the actual detection does not require interest

Use it for calculations;

--- Deleted Table 11, Table 12 and Table 13 in ISO 8486-2..2007, and added the detailed calculation formula of the parameter K value to

Adapt to the actual situation of our country.

The following editorial changes have been made in this section.

--- Modified the standard name;

--- Modified the expression of the scope;

--- Deleted the informative Appendix A in ISO 8486-2..2007.

This part is proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Abrasives Standardization Technical Committee (SAC/TC139).

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1 Scope

This part of GB/T 2481 specifies the terms and definitions, particle size groups of corundum, silicon carbide fine powder F230 ~ F2000, J240 ~ J8000

Grain size classification, fine powder detection, detection methods, marks and signs.

This section applies to the manufacture of consolidated abrasives and fine powders for general industrial use, fine powders for precision grinding, and fine powders recovered from consolidated abrasives,

And loose powder for polishing.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 4676 Ordinary abrasive sampling method (GB/T 4676-2018, ISO 9138..2015, MOD)

GB/T 16458 Terminology of Abrasives

3 Terms and definitions

The terms and definitions defined in GB/T 16458 and the following apply to this document.

3.1

Micro powder

When the particle size composition is checked by the sedimentation method or the resistance method, the median particle size ds_{50} (or dv_{50}) is not greater than 64 μm .

4.1 Micro powder series

The fine powder specified in this part includes two series of F series fine powder for general industrial use and J series fine powder for precision grinding.

The front is prefixed with the letters "F" and "J", respectively.

4.2 Particle size composition

The particle size composition of F series fine powder and J series fine powder is determined according to the following criteria.

- a) The maximum particle size should not exceed the maximum allowable value of ds_0 (or dv_0);
- b) At the 3% point of the particle size composition curve, its particle size (theoretical particle size) should not exceed the maximum allowable value of ds_3 (or dv_3);
- c) At the 50% point of the particle size composition curve, the median particle size (theoretical particle size) should be within the allowed range of the specified ds_{50} (or dv_{50});
- d) At the 80%/75%, 94%/95% points of the particle size composition curve, the particle size (theoretical particle size) should reach ds_{80} (or dv_{75}), $ds_{94/95}$ (Or dv_{94}) the minimum allowable value.

These four criteria should be met at the same time. The specified values of each particle size number of F series micropowder are shown in Table 1 (applicable to X-ray gravity sedimentation method and resistance

Method, corresponding to the values of 80% and 94%), Table 2 (applicable to the settlement tube method, corresponding to the values of 80% and 95%); the specified value of each particle size number of J series fine powder