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

GB/T 5211.18-2015

Replacing GB/T 5211.18-1988

**General methods of test for pigments and extenders -- Part 18:
Determination of residue on sieve -- Water method (Manual
procedure)**

颜料和体质颜料通用试验方法 第18部分：筛余物的测定 水法（手工操作）
(English Translation)

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Foreword

GB/T 5211 "pigments and extenders - Common test methods" is divided into the following sections.

- Part 1. Determination of cold water-soluble material extraction;
- Part 2. Determination of matter soluble heat extraction;
- Part 3. Determination of 105 °C volatile matter;
- Part 4. Determination of filling volume and apparent density;
- Part 5. Determination of resistance;
- Part 11. Water-soluble sulfates, chlorides and nitrates determination;
- Part 12. Determination of water extract resistivity;
- Part 13. Determination of pH of aqueous extract;
- Part 14. Determination of residue on sieve Mechanical flushing procedure;
- Part 15. Determination of oil absorption;
- Part 16. Comparison of tinting strength of white pigments;
- Part 17. Comparison of white pigment ratio (hiding power) of;
- Part 18. Determination of sieve residue Water Act (manual);
- Part 19. Determination of relative tinting strength of colored pigments and color dilute visual comparison;
- Part 20. The character system, white, black and colored pigments colorimetric color comparison.

Section 5 which is GB/T 5211.5-1985 "paint water resistance assay", GB/T 5211.6-1985 "pigment acid resistance test Titration ", GB/T 5211.7-1985" pigment alkali resistance assay

", GB/T 5211.8-1985" oil pigment assays " GB/T 5211.9-1985 "paint solvent resistance assay" and GB/T 5211.10-1985 "paraffin-resistant pigment assays" six criteria Integration amended and replaced by the above six criteria in 2008.

This section GB/T 5211 Part 18.

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

This Part replaces GB/T 5211.18-1988 "Determination of residue on sieve pigment water law manual", and GB/T 5211.18-Compared to 1988, the main technical changes are as follows.

--- Equivalent to using the previous version for non-ISO 787-7. 1981, edition of modification using ISO 787-7:2009;

--- Increasing the normative references "GB/T 3186, GB/T 6005, GB/T 11415", delete the references to normative documents "GB/T 6003" (see Chapter 2, Section 2 of the 1988 edition);

--- Increased sampling requirements (see Chapter 3);

--- The provisions of the instrument, increasing the content of balance, dryer and washing (see Chapter 4, Chapter 3 of the 1988 edition);

--- Modify the sample volume requirements, the "10g" to "10g ~ 100g or more amount" (see 52, 1988 version 4.1.);

--- Modify the mode of preparation of the dispersion, the dispersion of the sample preparation methods and the use of mixing water regulations more flexible, increase with "as agreed by the parties concerned, the specimen can be no pre-dispersed directly into the screen in" provisions (see 5.3, 1988 Edition 4.2);

--- Measuring step increases "sample is easily dispersed in water when tap water is available" provisions (see 5.4);

--- Remove the sieve residue treatment method c) using the method specified in the weighing bottle (see 1988 edition 4.3);

--- Specified in the test report, adding "this part number, and whether the dispersion method using a brush grinding sieve caking" Content (See Chapter 7, Chapter 6, 1988 edition).

This section uses redrafted law revision of international standards ISO 787-7:2009 "pigments and extenders - Common test methods 7 Part I. Determination of hand sieve residue method is water. " Technical differences exist compared to 2009, the terms of these differences has been involved through its outer margin bit. This part of ISO 787-7 Opposed to a single vertical line (|) were labeled Appendix A gives the list of the corresponding technical differences and their causes.

This section also made the following editorial changes.

- To be consistent with the existing standard numbering, the standard name will be changed to "pigments and extenders - Common test methods - Part 18. sieve Determination of residue Water Act (manual)";
- Increase the informative Appendix A;
- Remove the "precision 6.2";
- Chapter 1, Section 4 and Chapter 5 of the textual representation was modified.

This part is proposed by the China Petroleum and Chemical Industry Association.

This part of the National Standardization Technical Committee and the pigment coating (SAC/TC5) centralized.

This section drafted by. CNOOC Changzhou Paint Chemical Research Institute Co., Ltd., Shanghai Yipin Pigments Co., Ltd., Shandong Dong Jia Group shares Parts Limited, Jiangsu double-Chemical Pigment Co., Ltd., Beijing sea boat corrosion protection Industrial Co., Ltd., Shenghua Group Deqing Huayuan Pigment Co., Ltd Xuancheng Yabang Chemical Co., Ltd., Shenzhen Hirota Decoration Group Co., Shangnan Castle Peak Mining Co.

the company.

1 Scope

This section GB/T 5211 specifies the sample is dispersed pigments and extenders - Common test methods - Determination of sieve residue in water performed.

GB/T 5211 Part 14 specifies the general test method for determining pigments and extenders sieve residue by mechanical washing method. for Most pigments and extenders, these two methods will get different results, therefore, should clearly indicate what kind of selection in the product standard Methods, and noted in the test report.

NOTE: When this general method does not apply to a specific product should be prescribed a special method to determine the sieve residue.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3186 Paints, varnishes and raw materials for paints and varnishes - Sampling (GB/T 3186-2006, ISO 15528:2000, IDT) Basic dimensions GB/T 6005 Test sieves - Metal wire cloth, perforated plate and electroformed sheet mesh (GB/T 6005-2008, ISO 565:1990,

MOD) GB/T 11415 Laboratory sintered (porous) filter pore size, grade and grade (GB/T 11415-1989, ISO 4793.

1980, NEQ)

3 Sampling

According to the provisions of GB/T 3186 to take a representative sample of the test product.

4 Instrument

4.1

Test sieves. meet GB/T 6005 requirements should be specified in the test report used test sieve diameter and pore size.

Note: commonly used test sieve pore size of 45 μ m. We recommend regular inspection with a microscope of sieve, sieve to determine there is no blockage and wear. in case Damaged sieve, sieve it should be scrapped.

4.2

brushes. bristle system, about the size of a thickness of 5mm, width 20mm, length 35mm.

4.3

Glass filter. meet GB/T 11415 requirements grades for P40 (pore size greater than 16 μ m, less than or equal to 40 μ m). Or 50mL Beaker.

4.4

Oven. can be maintained at $(105 \pm 2) ^\circ\text{C}$.

4.5

Balance. Precision 0.1g, the largest weighing 1000g.

4.6

Balance. Precision 1mg.

4.7

dryer. built effective desiccant.

4.8

Washing. Built for the sample solution is dispersed.

4.9

with a mechanical stirrer. adjustable speed, the use of lift, avoiding fragmentation when the sample swirl. Mixing head consists of a diameter of about